Recent trends in reperfusion in STEMI (ST elevation myocardial infarction) in a South Indian tier-3 city

A dissertation submitted in partial fulfillment of DM-Branch II Cardiology Examination of the Tamilnadu Dr. MGR Medical University, Chennai, to be held in July/August 2010

CERTIFICATE

This is to certify that this dissertation entitled '**Recent trends in reperfusion in STEMI (ST elevation myocardial infarction) in a South Indian tier-3 city**' is a bonafide work done by Dr. Brajesh kumar kunwar in partial fulfillment of rules and regulation for DM (Branch II-Cardiology) examination of the Tamil Nadu Dr. M. G. R. Medical University, to be held in July/August 2011.

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Acronyms

PCI - Percutaneous coronary intervention

ACS - Acute coronary syndrome

UA - Unstable angina

NSTEMI - Non ST- segment elevation myocardial infarction

STEMI - ST- segment elevation myocardial infarction

MI - Myocardial infarction

PW - Posterior wall

LW - Lateral wall

SD - Standard deviation

IWI - Inferior wall myocardial infarction

STK - Streptokinase

TNK - Tenecteplase

CVA - Cerebrovascular accident

DM- Diabetes Mellitus

HTN- Hypertension

ADR- Adverse drug reaction

LV- Left ventricle

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Dr. Brajesh Kumar Kunwar

DECLARATION

I, Dr. Brajesh Kumar Kunwar, hereby declare that this dissertation entitled '**Recent trends in reperfusion in STEMI (ST elevation myocardial infarction) in a South Indian tier-3 city**' has been prepared by me under the direct supervision and guidance of Dr. George Joseph MD, DM, Professor, Department of Cardiology, Christian Medical College, Vellore. This is being submitted to Dr. M. G. R. Medical University in partial fulfillment of regulations for the DM (Cardiology) examination to be held in July/August 2011.

This dissertation has not been submitted by me either in part or in full on any previous occasion to any university or institution for the award of any degree or diploma.

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ABSTRACT

Recent trends in reperfusion in STEMI (ST elevation myocardial infarction) in a South Indian tier-3 city.

Background: Coronary artery disease is the leading cause of death in both the developing and developed countries. India is going to have a large proportion of the total number of such cases in the world in the near future. In India, larger proportions of patients with acute coronary syndromes (ACS) present with ST-elevation myocardial infarction (STEMI) compared to patients in the developed countries. The best treatment for STEMI is reperfusion with percutaneous coronary interventions (PCI). Facilities for PCI are not available in many tertiary care centres in India. We sought to study the recent trends of reperfusion in patients of acute STEMI in Vellore, a tier-3 South Indian city.

Methods: 1459 consecutive patients presenting with acute STEMI to our centre were enrolled. Their demographic profile, risk factors and mode of reperfusion were recorded. The study period from August 2008 to July 2010 was divided into four half-years and trends of reperfusion were compared over this study periods.

Results: Mean age of study population was 56.3±11.8 years. There were 1214 (83%) males and 245 (17%) females. The largest number of patients were in the age group of 40-59 years (313, 50%). 1255 (86%) of patients received some form of reperfusion therapy either by thrombolytic agent or PCI. Thrombolysis with streptokinase in 1019 (69.8%) patients was the most common mode of reperfusion therapy used. This was followed by primary

PCI which was used in of 137 patients (9.4%) and tenecteplase in 99 (6.7%) patients. 204 (13.8%) did not receive any form of reperfusion therapy for various reasons, the most common being late presentation in 175 (85.7%). Number of patients presenting with STEMI increased from 297 in the first half-year to 465 in the last half-year. The PCI numbers also increased from 19 in the first half year to 45 in the last half year. Use of tenecteplase as a thrombolytic agent remained constant inspite of rising STEMI case load. The most common territory involved in STEMI was anterior wall 593(58.2%).

Conclusion: Patients presenting with STEMI in this study were on an average a decade younger than western population. There was about 20% increase in STEMI every year in the present study. Younger patients are least likely to receive primary PCI or tenecteplase as reperfusion therapy. 86% of patients received some form of reperfusion therapy and streptokinase was the most common type of reperfusion therapy used. Primary PCI rates increased at 20% per year during this study but still <10% of STEMI patients receive it. Tenecteplase which is superior to streptokinase as a thrombolytic agent was used in less than 10% of patients due to high cost. 1 in 8 patients of STEMI did not receive any form of reperfusion therapy; the most common reason for this was late presentation.

INTRODUCTION

Coronary artery disease (CAD) is the most common cause of death in both developing & developed countries [1]. By 2020 IHD is expected to increase by more than 120% in the developing countries as compared to 30-40% in the developed countries [2]. 60% of the world's heart disease is expected to occur in India [3]. This will place a huge strain on healthcare resources which are already inadequte and overstretched. Providing IHD patients optimal care in the Indian setting requires specific and relevant data applicable to the general population.

The spectrum of IHD in the developed countries appears to be different from that in the Indian population. Fewer than 40% of the patients with acute coronary syndrome present with ST-segment elevation myocardial infarction (STEMI) in the developed countries [4,5] and this is also showing a decreasing trend with time. On the other hand 60% of patients with ACS present with ST segment elevation myocardial infarction in India. In patients with ST elevation myocardial infarction, the main consideration in treatment is reperfusion which is influenced by duration from onset of symptoms. The best treatment for patients presenting with STEMI is reperfusion either in the form of primary percutaneous coronary intervention (PCI) or by means of thrombolytic agents. Primary PCI re-establishes blood flow in the culprit coronary artery by mechanically dislodging the thrombus obstructing the vessel, and has been shown consistently in all studies to be superior to thrombolysis. Primary PCI is not available in most tertiary care centres in India. So in most centres treatment of STEMI is based on pharmacological thrombolysis by using streptokinase or tenecteplase.

Most data on patients with acute coronary syndromes are derived from several large registries [8,9,10,11,12,13,14,15,16] from developed countries. There are a few small studies from India restricted to a few hospitals [17,18,19]. We present data from a registry of more than 1450 patients with STEMI who presented to CMC Vellore looking at the treatment modalities used for reperfusion.

AIMS AND OBJECTIVES

- 1:- To evaluate the current trends in revascularization in STEMI in a tertiary care centre in South India.
- 2:- To assess the number and proportion of patients receiving pharmacological or invasive reperfusion treatment of STEMI.
- 3;- To assess the number of patients not receiving any form of reperfusion therapy and the reasons for the same.

REVIEW OF LITERATURE

EPIDEMIOLOGY

The second half of the 20th century witnessed a global spread of the coronary artery disease (CAD) epidemic especially in developing countries, including India. The underlying pathology of CAD is atherosclerosis, which develops over many years and is usually advanced by the time symptoms occur, generally in middle age. Acute coronary and cerebrovascular events frequently occur suddenly, and are often fatal before medical care can be given.

Of an estimated 58 million deaths globally from all causes in 2005, cardiovascular disease accounted for 30%[23, 24.] This proportion is equal to that due to infectious diseases, nutritional deficiencies, and maternal and perinatal conditions combined[20]. It is important to recognize that a substantial proportion of these deaths (46%) were in people under 70 years of age, in the more productive period of life[21]. Globally, CAD was the leading killer in the age group ≥ 60 years, and, with 1332000 deaths in adults aged 15-59 years, CAD was ranked behind HIV/AIDS only[22]. The principal cardiovascular disorder responsible for the global rise in mortality is atherosclerotic vascular disease rather than rheumatic heart disease. CAD is the leading cause of death in the world, and cerebrovascular disease is the second leading cause[23,24].

CARDIOVASCULAR DISEASE IN INDIA

At the threshold of the new millennium the threat of CAD is looming large as this new epidemic afflicts Indians at a relatively younger age with severe and diffuse forms of lesions. Recently, the subject of CAD in Indians (referred to as immigrants or Asian Indians or South Asians when outside India) has become a challenge for many research centres worldwide[25,26]. The prevalence of CAD has progressively increased in India during the latter half of the last century, The prevalence of CAD is two times higher (10%) in urban than in rural India [29,30]. South Indians have higher prevalence, 7% in rural and 14% in urban areas. The vulnerability of urban Indians to CAD is possibly related to different nutritional, environmental, and life-style factors. Unfortunately, the on-going urbanization of rural India is likely to narrow down these differences[31].

India is in the midst of a demographic transition. The average life expectancy at birth in India is 63.7 years, being 63.1 for males and 64.4 for female, compared with the national average of 41.2 years in 1951-1961[22]. The demographic transition has led to an increase in the number of older people (aged >60 years), from 19.61 million in 1950 to 75.93 million in 2000. The increase in life expectancy has brought a large section of population to an age where cardiovascular disease starts manifesting itself. In India CAD rates have increased during last 30 years, whereas declining trends have been noticed in developed western countries[22].

Reports on CAD in Indians from different parts of the world have shown that Indians are at 3-4 times higher risk of CAD than white Americans, 6 times higher than Chinese, and 20 times higher than Japanese[25,26,27]. The exact prevalence of CAD in India is difficult to estimate owing to the lack of large population based studies. Absence of a centralized death registry for CVDs and irregularities in completion of death certificates also hamper estimation of the actual burden of

CVD. Heart diseases occur in Indians 5 to 10 years earlier than in other populations around the world[28]. According to the INTERHEART study, the age at first presentation of acute MI in the south Asian (Bangladesh, India, Nepal, Pakistan, Sri Lanka) population is 53 years, whereas that in western Europe, China, and Hong Kong is 63 years, with men more than women affected[32]. The first myocardial infarction (MI) occurs in 4.4% of Asian women and 9.7% of men at age less than 40 years, which is 2 to 3.5 fold higher than in the west European population and is third highest of all the regions studied worldwide[32].

The INTERHEART study[32], involving 52 countries, established an association between conventional modifiable risk factors for MI in all regions of the world, including South Asia, and in both sexes and at all ages. In South Asians, apolipoprotein (Apo) B/ApoA1 ratio and smoking were the important risk factors, as in the rest of the world. However, hypertension, abdominal obesity, and diabetes had more severe effects in South Asians. The study also showed that hypertension and diabetes were more important risk factors in younger Indian women than men. It was also observed that the risk of CAD increased incrementally with smoking and it was a greater risk factor in younger men than in women.

Several factors appear likely to have contributed to the acceleration of CAD epidemic in India in recent times. These are:

(i) Demographic transition to an older population, as a result of increasing life expectancy

(ii) Confluence of both conventional risk factors and non-conventional risk factors in Indians [28].

Conventional factors like hypertension, diabetes, hyper-cholesterolemia, smoking etc. owe their origin to growing urbanization and western 'acculturation' amongst Indians.

Non-conventional risk factors like hyper-insulinemia, insulin resistance, lipoprotein A etc. are determined by genes or other 'programming' factors and their high prevalence amongst Indians probably explain the malignant, precocious nature of CAD that typically affects Indians. Recently a relationship between low birth-weight, which is widely prevalent amongst Indian newborns, and enhanced susceptibility to CAD in adult life ('Barker hypothesis') has been found. These multiplicative effects of conventional and emerging risk factors appear to provide a plausible explanation for the excess burden of CAD among Indians, many of whom are lean, non-smoking, vegetarian[33].

Cardinal features of coronary artery disease among Indians compared to other populations[33]:

Higher rates

- 2 to 4 fold higher prevalence, incidence, hospitalization, mortality

Greater prematurity

- 5 to 10 years earlier onset of first Ml
- 5 to 10 fold higher rate of Ml and death in young <40 years of age)

Greater severity[33]

- three vessel disease common even among young premenopausal women
- large Ml with greater muscle damage

Higher prevalence of glucose intolerance

- insulin resistance syndrome, diabetes, central obesity

Lower prevalence of conventional risk factors

- hypertension, obesity, cigarette smoking
- cholesterol levels: similar to Whites but higher than other Asians

Higher prevalence of emerging (thrombogenic) risk factors

- high levels of lipoprotein A, homocysteine, apoprotein B

- high levels of triglycerides, fibrinogen
- low levels of HDL
- small dense LDL

Higher rates of clinical events for a given degree of atherosclerosis

- double that of whites
- four fold higher than Chinese
- higher proportion of unstable or vulnerable plaques [33]

The 4 main risk factors, which showed consistently significant associations across all south Asian countries in both sexes were current and former smoking, high ApoB100/Apo-I ratio, history of hypertension and history of diabetes.

Between 1990 and 2020, CAD is expected to increase by 120% in women and 137% in men in developing countries, compared to 30-60% in developed countries[2]. In addition, the proportion of patients with STEMI at 60% of the acute coronary syndrome patients is much higher than the proportion observed in developed countries where fewer than 40% had STEMI[5]. This suggest that patients with acute coronary syndrome in India are likely to have worse prognosis than patients in western countries. Also, the average age of acute coronary syndrome patients in India at 57 years is also much lower than that in western countries. Patients in India also take longer time to reach hospitals, and for initiation of treatment. The majority of patients of MI in India receive thrombolytic therapy for reperfusion while only 8% of STEMI patients are treated with primary PCI. Correspondingly the 30 days mortality rate in Indian patients with MI is higher than in registries in high income countries[6].

Myocardial Infarction

Atherosclerosis is the gradual buildup of cholesterol and fibrous tissue in plaques in the wall of arteries (in this case, the coronary arteries), typically over decades[35]. Blood stream column irregularities visible on angiography reflect artery lumen narrowing as a result of decades of advancing atherosclerosis[37]. Plaques can become unstable, rupture, and additionally promote a thrombus that occludes the artery; this can occur in minutes. When plaque rupture occurs, it exposes the intimal layer and initiates a cascade of platelet activation and thrombosis resulting in occlusion of the vessel and infarction of the subjacent myocardium[38]. Acute myocardial infarction refers to two subtypes of acute coronary syndrome: non-ST-elevation myocardial infarction and ST-elevation myocardial infarction, which are most frequently (but not always) a manifestation of atherosclerotic coronary artery disease[34]. Myocardial infarctions are usually classified by size: microscopic (focal necrosis), small (<10% of the left ventricle myocardium), moderate (10-30% of the left ventricle myocardium), and large (>30% of the left ventricle myocardium), and by location[38].

Pathology of myocardial infarction

Myocardial infarction can be classified pathologically as acute, healing, or healed. Acute myocardial infarction is characterized by the presence of polymorphonuclear leukocytes. The presence of mononuclear cells and fibroblasts, and the absence of polymorphonuclear leukocytes characterize healing infarction. Healed infarction is manifested as scar tissue without cellular infiltration. The entire process leading to a healed infarction usually takes at least 5-6 weeks. Reperfusion may alter the macroscopic and microscopic appearance of the necrotic zone by producing myocytes with contraction bands and large quantities of extravasated erythrocytes.

Myocardial infarction can be classified temporally as evolving (<6 h), acute (6 h-7 days), healing (7-28 days), and healed (29 days and beyond)[32].

Table 1 Criteria of the World Health Organization and the Joint European Society of Cardiology/American College of Cardiology

World Health Organization criteria for MI

Definite acute MI

1. Definite ECG or
2. Symptoms typical or atypical or inadequately described, together with probable ECG or abnormal enzymes or
3. Symptoms typical with abnormal enzymes with ischaemic or non-codable ECG or ECG not available or
4. Fatal case, whether sudden or not, with naked eye appearance of fresh MI, recent coronary occlusion found at necropsy, or both

Joint European Society of Cardiology/American College of Cardiology criteria

Criteria for acute, evolving, or recent MI—one of the following:

1. Typical rise and fall of biochemical markers of myocardial necrosis with at least one of the following:
   a) ischaemic symptoms
   b) Q waves
   c) ischaemic ECG changes
   d) coronary artery intervention
2. Pathological findings of an acute MI

Criteria for established MI—any of the following:

1. Development of new pathological Q waves on serial ECGs
2. Pathological findings of a healed or healing MI

MI, myocardial infarction.

Reference [40]

A 2007 consensus document classifies myocardial infarction into five main types [39] :

Type 1 - Spontaneous myocardial infarction related to ischaemia due to a primary coronary event such as plaque erosion and/or rupture, fissuring, or dissection

Type 2 - Myocardial infarction secondary to ischemia due to either increased oxygen demand or decreased supply, e.g. coronary artery spasm, coronary embolism, anemia, arrhythmias, hypertension, or hypotension

Type 3 - Sudden unexpected cardiac death, including cardiac arrest, often with symptoms suggestive of myocardial ischemia, accompanied by presumably new

ST elevation, or new left bundle branch, or evidence of fresh thrombus in a coronary artery by angiography and/or at autopsy, but death occurring before blood samples could be obtained, or at a time before the appearance of cardiac biomarkers in the blood.

Type 4 - Associated with coronary angioplasty or stents:

Type 4a - Myocardial infarction associated with PCI

Type 4b - Myocardial infarction associated with stent thrombosis as documented by angiography or at autopsy

Type 5 - Myocardial infarction associated with coronary artery bypass grafting.

The ST segment of the cardiac cycle represents the period between depolarization and repolarization of the left ventricle. In the normal state, the ST-segment is isoelectric relative to the PR segment & most ST-segment elevation is a result of non-AMI causes. A study showed that of 123 adult chest pain patients with ST-segment elevation ≥ 1mm, 63 patients (51%) did not have myocardial infarctions. These non-MI patients had were mainly left bundle branch block (LBBB) (21%) and left ventricular hypertrophy (LVH) (33%).

Causes of ST- Segment Elevation[41]

- Acute Pericarditis
- Benign Early Repolarization
- Left bundle branch block with acute MI (Sgarbossa et al's criteria)
- Left ventricular hypertrophy
- Left ventricular aneurysm

- Brugada syndrome
- Hyperkalemia
- Hypothermia
- Central nervous system pathologies
- Prinzmetal angina
- Post electrical cardioversion

Acute Myocardial Infarction

ST- segment elevation is measured:

- At J point – if relative to PR segment
- At 0.06 – 0.08s from J point – if relative to TP segment

Many studies have been put forward with different ST-segment elevation levels indicating as significant for diagnosis of ST-segment elevation myocardial infarction

ST Segment Elevation Criteria [42]

Study	Minimum Consecutive Leads	Minimum ST Elevation (mm) Limb leads	Minimum ST Elevation (mm) Precordial leads
AHA/ACC	2	1	1
GISSI-1	1	1	2
GISSI-2	1	1	2
GUSTO	2	1	2
TIMI	2	1	1
TAMI	2	1	1
Minnesota Code	1	1mm:I,II,III,Avl,avf,V5-6	
		2mm:V1-4	

Irrespective of which definition is used, ST elevation has poor sensitivity for AMI where up to 50% of patients exhibit 'atypical' changes at presentation including isolated ST depression, T inversion or even a normal ECG.

ST- segment elevation MI occurs due to persistent complete occlusion of an artery supplying a significant area of myocardium without adequate collateral circulation in comparison to unstable angina (UA)/ non ST- segment elevation myocardial

infarction (NSTEMI), which result from non-occlusive thrombus, small risk area, brief occlusion, or an occlusion with adequate collaterals

Morphology of ST-segment elevation

Convex ST-segment is more suggestive of myocardial infarction as compared to concave ST- segment elevation

Benign Early Repolarization

Benign early repolarization is seen most commonly in young black population. It is often confused with ST elevation myocardial infarction (STEMI).

ECG characteristics of benign early repolarization[43]

1: ST- segment elevation <2 mm

2: Concavity of initial portion of the ST- segment

3: Notching or slurring of the terminal QRS complex

4: Symmetrical, concordant T wave of large amplitude

5; Widespread or diffuse distribution of STE (does not demonstrate territorial distribution)

6: Relative temporal stability

Distribution

ST- segment elevation due to acute myocardial infarction (MI)
usually demonstrate regional or territorial pattern

- Anterior MI – V3-V4
- Septal MI – V2-V3
- Anteroseptal MI – V1/2 – V4/5
- Lateral MI – V5/V6

- Inferior MI – II, III, aVF

Diffuse ST-segment elevation suggestive of non MI causes, e.g. pericarditis[43]. ST-elevation myocardial infarction is difficult to diagnose in presence of left bundle branch block. Sgarbossa criteria was put forward to diagnose myocardial infarction in presence of left bundle branch block (LBBB) [43.]

Sgarbossa Criteria[42]

ST Elevation ≥ 1 mm and concordant with QRS complex	Score 5 points Odds Ratio (OR) 25.2
ST Depression ≥ 1 mm in V1, V2, V3	Score 3 points OR 6.0
ST Elevation ≥ 5 mm and discordant with QRS complex	Score 2 points OR 4.3

A total score of 3 or more suggests that the patient is likely experiencing an AMI based on the ECG criteria. With a score less than 3, the ECG diagnosis is less certain requiring additional evaluation. Subsequent publications have suggested that Sgarbossa's criteria is less useful than reported, with studies demonstrating decreased sensitivity and inter-rater reliability

Reperfusion Strategy in Myocardial Infarction

Coronary atherosclerosis is a diffuse process with segmental lesions called coronary plaques. The plaque ruptures, denuding the endothelial lining, and allows prothrombotic enzymes and molecular triggers to mix with the blood. Platelets are activated, and the coagulation cascade is amplified resulting in a thrombus that

occludes the vessel, preventing the circulation of oxygenated blood. Irreversible ischemia-induced myocardial necrosis may occur within 20-60 minutes of occlusion. The mainstay of treatment is reperfusion therapy through administration of fibrinolytics (pharmacologic reperfusion) or primary percutaneous coronary intervention '(PCI) (mechanical reperfusion). Evidence exists that expeditious restoration of flow in the obstructed infarct artery after the onset of symptoms in patients with STEMI is a key determinant of short- and long- term outcomes regardless of whether reperfusion is accomplished by fibrinolysis or PCI [42,43,44]. A critically important goal of reperfusion is to restore flow in the infarct artery as quickly and completely as possible, but the ultimate goal of reperfusion in STEMI is to improve myocardial perfusion in the infarct zone. Despite adequate restoration of flow in the epicardial infarct artery, perfusion of the infarct zone may still be compromised by a combination of microvascular damage and reperfusion injury [45,46].

Microvascular damage occurs as a consequence of downstream embolization of platelet microemboli and thrombi followed by the release of substances from activated platelets that promote occlusion or spasm in the microvasculature. Reperfusion injury results in cellular edema, free radical formation, calcium overload, and acceleration of the apoptotic process. Cytokine activation in the infarct zone leads to neutrophil accumulation and inflammatory mediators that contribute to tissue injury.

Time from onset of symptoms to fibrinolytic therapy is an important predictor of MI size and patient outcome [47]. The efficacy of fibrinolytic agents in lysing thrombus diminishes with the passage of time[48]. Fibrinolytic therapy administered within the first 2 hours (especially the first hour) can occasionally abort MI and dramatically reduces mortality[48,49]. Because the benefit of fibrinolytic therapy is

directly related to the time from symptom onset, treatment benefit is maximized by the earliest possible application of therapy.

The present recommendations for fibrinolytic therapy say that: In the absence of contraindications, fibrinolytic therapy should be administered to STEMI patients with symptom onset within the prior 12 hours and ST elevation greater than 0.1 mV in at least 2 contiguous precordial leads or at least 2 adjacent limb leads or patients with symptom onset within the prior 12 hours and new or presumably new LBBB. In the absence of contraindications, it is reasonable to administer fibrinolytic therapy to ST-segment elevation MI (STEMI) patients with symptom onset within the prior 12 hours and 12-lead ECG findings consistent with a true posterior MI. It is also reasonable to administer fibrinolytic therapy to patients with symptoms of STEMI beginning within the prior 12 to 24 hours who have continuing ischemic symptoms and ST elevation greater than 0.1 mV in at least 2 contiguous precordial leads or at least 2 adjacent limb leads[7.]

Contraindications and Cautions For Fibrinolytic Use In ST-Elevation Myocardial Infarction[7]

Absolute contraindications

- Any prior intra-cerebral haemorrhage
- Known structural cerebral vascular lesion (eg, arterio- venous malformation)
- Known malignant intracranial neoplasm (primary or metastatic)
- Ischemic stroke within 3 months except acute ischemic stroke within 3 hours
- Suspected aortic dissection
- Active bleeding or bleeding diathesis (excluding menses)

- Significant closed head or facial trauma within 3 months

Relative Contraindications

- History of chronic severe, poorly controlled hypertension
- Severe uncontrolled hypertension on presentation (systolic blood pressure greater than 180 mm Hg or diastolic blood pressure greater than 110mm Hg)
- History of prior ischemic stroke greater than 3 months, dementia, or known intracranial pathology not covered in contraindications
- Traumatic or prolonged (greater than 10 minutes) cardiopulmonary resuscitation or major surgery (less than 3 weeks)
- Recent (within 2 to 4 weeks) internal bleeding
- Non-compressible vascular punctures
- For streptokinase/anistreplase : prior exposure (more than 5 days ago) or prior allergic reaction to these agents
- Pregnancy
- Active peptic ulcer
- Current use of anticoagulants : the higher the INR, the higher the risk of bleeding

Efficacy of Intravenous Fibrinolytic Therapy In STEMI

It has been well established that fibrinolytic therapy provides a survival benefit for patients with STEMI, based on large, well-controlled clinical trials [47,48,49.] The mechanism of benefit, which may have different time dependencies, include salvage of myocardium with reduced infarct size, favourable effect on infarct healing and myocardial remodeling, and reduced electrical heterogeneity and potential for life-threatening ventricular arrythmia[50.]

An overview of the results of 9 trials by the 'Fibrinolytic Therapy Trialists' Collaborative Group comparing the outcome of patients undergoing fibrinolytic therapy and those of controls demonstrated a highly significant 18% relative reduction in 35 days mortality (9.6% fibrinolysis versus 11.5% control), which corresponds to absolute reductions in 35-day mortality rates of approximately 30 per 1000 for patients who arrived at the hospital within 6 hours of the onset of symptoms and of approximately 20 per 1000 for patients who arrived 7-12 hours after the onset of symptoms[8].This survival benefit is maintained over the long term (up to 10 years).

THROMBOLYTIC AGENTS

The fibrinolytic agents currently approved for treating patients with STEMI include streptokinase, alteplase, reteplase, and tenecteplase. Thrombolytic agents available today are serine proteases that work by converting plasminogen to the natural fibrinolytic agent plasmin. Plasmin lyses clot by breaking down the fibrinogen and fibrin contained in a clot.

Streptokinase

The history of thrombolytic therapy began in 1933 when Tillet and Carner discovered that filtrates of broth cultures of certain strains of Streptococcus bacteria (beta-hemolytic streptococci) could dissolve a fibrin clot[51.] Streptokinase found its initial clinical application in combating fibrinous pleural exudates, hemothorax, and tuberculous meningitis[52.] In 1958, streptokinase was first used in patients with acute myocardial infarction, and this changed the focus of treatment. At first, streptokinase infusion produced conflicting results until the Gruppo Italiano per la Sperimentazione della Streptochinasi nell'Infarto Miocardico

(GISSI) trial in 1986, which validated streptokinase as an effective therapy and established a fixed protocol for its use in acute myocardial infarction[52.] STK has no proteolytic activity of its own and thus activates PG to PN indirectly by first forming a high affinity equimolar complex with PG (STK-PG activator complex) [51]. It forms a 1:1 complex with plasminogen causing conversion to plasmin. It is non specific, activating circulating as well as clot-bound plasminogen, and causes extensive fibrinogen depletion.

Streptokinase is antigenic. Neutralizing antibodies are significant following use, and repeat administration should be avoided. Allergic reaction (rash, chills, urticaria) occurs in around 4% of patients and anaphylactic shock occurs in 0.5% of patients [53.] Hypotension can be significant (average decrease ~ 35 mm systolic blood pressure (SBP) [54] and may be worsened by rapid administration, which excludes bolus use and necessitates constant IV infusion. It is commonly given as 1.5 million units over 60 min.

Alteplase

Tissue type plasminogen activator (t-PA) is a naturally occuring serine protease, which is produced by healthy endothelium. Its levels are increased with exercise and inhibited by plasminogen activator inhibitor (PAI-1). Alteplase is a commercially available, genetically engineered, bacterially produced version of human t-PA. it exhibits marked specificity for the plasminogen-fibrin complex, although at the doses necessary to achieve rapid lysis, there is ~ 50% depletion of circulating fibrinogen. t-PA is associated with a higher early recanalization rate relative to streptokinase[55], but may be accompanied by an increase rate of reocclusion[56]. The half-life is approximately 5 min; thus, t-PA must be administered via continuous IV infusion over 90 min.

The accelerated dosing regimen has been proven to be the most effective[54] : 15 mg bolus over 1-2 min followed by 0.75mg/kg IV (≤ 35 mg) over 60 min. Weight adjustment is recommended because of excessive bleeding in lighter weight (<60 kg) patients and a trend toward decreased lysis in heavy weight (>90 kg) individuals[55] . Higher dose and double-bolus regimens have been associated with unacceptable bleeding rates[56,57] . The accelerated or front-loaded dosing regimen has been shown to have higher early patency rates, similar safety profile[54], and lower incidences of reocclusion as compared with the standard dosing regimen [60].

The TIMI (Thrombolysis in myocardial infarction), phase 1 trial randomly assigned 290 patients with evolving acute MI to altepase or to streptokinase. Alteplase was far superior in achieving coronary reperfusion; twice as many occluded infarct-related arteries opened after 90 minutes with alteplase than with streptokinase [61].

The GUSTO 1 study (41,021 patients) tested the accelerated dose regimen combined with intravenous heparin. Despite an increase in intracerebral bleeding with t-PA, overall benefit as assessed from the combined endpoint of total mortality and disabling stroke was significantly better with t-PA as compared with streptokinase (6.3% vs. &.3%)[61]. This translates into 15% mortality reduction or about 10 lives saved per 1,000 patients treated.

Reteplase

Reteplase is a deletion mutant of t-PA that exhibits preferential activation of fibrin-bound plasmin and a two to threefold increase half-life (15 min), permitting bolus administration. It has a lower affinity to fibrin (theoretically improving clot penetration), though similar fibrin specificity compared with alteplase. While initial studies showed superior infarct artery patency when compared with conventional dose t-PA in the RAPID 1 trial[62], and accelerated

dose t-PA in the RAPID-2 trial [63], the GUSTO III study (15,059 patients) showed equivalent 30-day mortality rates with reteplase (7.5%) versus accelerated-dose alteplase (7.2%). The rates of the combined endpoint, death, or nonfatal MI- disabling stroke were similar: 7.98% and 7.91%, respectively[64]. Reteplase offers the advantage of double-bolus administration: 10 units IV followed by another 10 units 30 min later. Additionally, no weight adjustment is required.

Tenecteplase

Tenecteplase was approved by the FDA as a fibrinolytic agent in 2000. This drug has a similar mechanism of action as alteplase (tPA). It is the latest thrombolytic agent approved for use in clinical practice produced by recombinant DNA technology. This drug is a 527 amino acid glycoprotein, which sustained several modifications in amino acids molecules. These modifications consist of a substitution of threonine 103 with asparagine, asparagine 117 with glutamine, and a tetra-alanine substitution at amino acids 296-299 in the protease domain. This change permits Tenecteplase to have a longer plasma half-life and more fibrin specificity. Tenecteplase has a half-life ranging initially from 20-24 minutes up to 130 minutes final clearance, most of it by liver metabolism.[66]

Because of the amino acid modifications, Tenecteplase has the advantage of a single bolus administration and decreased bleeding side effects due to high fibrin specificity. The ASSENT-2 trial evaluated the efficacy and safety of tenecteplase compared with alteplase in patients with AMI. Tenecteplase was found non-inferior to alteplase in terms of 30-day mortality. Tenecteplase was associated with fewer bleeding complications, major bleeding events (4.66% vs 5.94%), and lower need

for blood transfusion (4.25% vs 5.49%; p=.0002). Rates for intracranial hemorrhage were similar (tenecteplase 0.93%, alteplase 0.94%)[67.] Follow-up study showed that mortality rates between the two active therapy groups remained similar after one year[68]. Its prolonged half-life(~20 min) permits it to be dosed as a weight-adjusted 30-50 mg single bolus given over 2-5 sec. The recommended dose is 30 mg for persons less than 60 kg, 35 mg for 60-70 kg, 40 mg for70-80 kg, 45mg for 80-90 kg, and 50mg for > 90 kg. As a single-bolus agent, tenecteplase has become the most widely used fibrin-specific agent.

Evidence exists that expeditious restoration of flow in the obstructed infarct artery after the onset of symptoms in STEMI patients is a key determinant of short-and long-term outcomes regardless of whether reperfusion is accomplished by fibrinolysis or PCI[37-39].

Efforts should be made to shorten the time for rapid recognition and treatment of patients with STEMI such that door-to needle (or medical contact to needle) time for initiation of fibrinolytic therapy can be achieved within 30 min or that door to balloon (or medical contact to balloon) time for PCI can be kept under 90 minutes.

SELECTION FOR REPERFUSION STRATEGY

Several issues should be considered in selecting the type of reperfusion therapy: time from onset of symptoms: time from onset of symptoms to fibrinolytic therapy is an important predictor of MI size and patient outcome [66]. The efficacy of fibrinolytic agents in lysing thrombus diminishes with the passage of time [69]. Fibrinolytic therapy administered within the first 2 hours (especially the first hour) can occasionally abort MI and dramatically reduce mortality [70,71] .

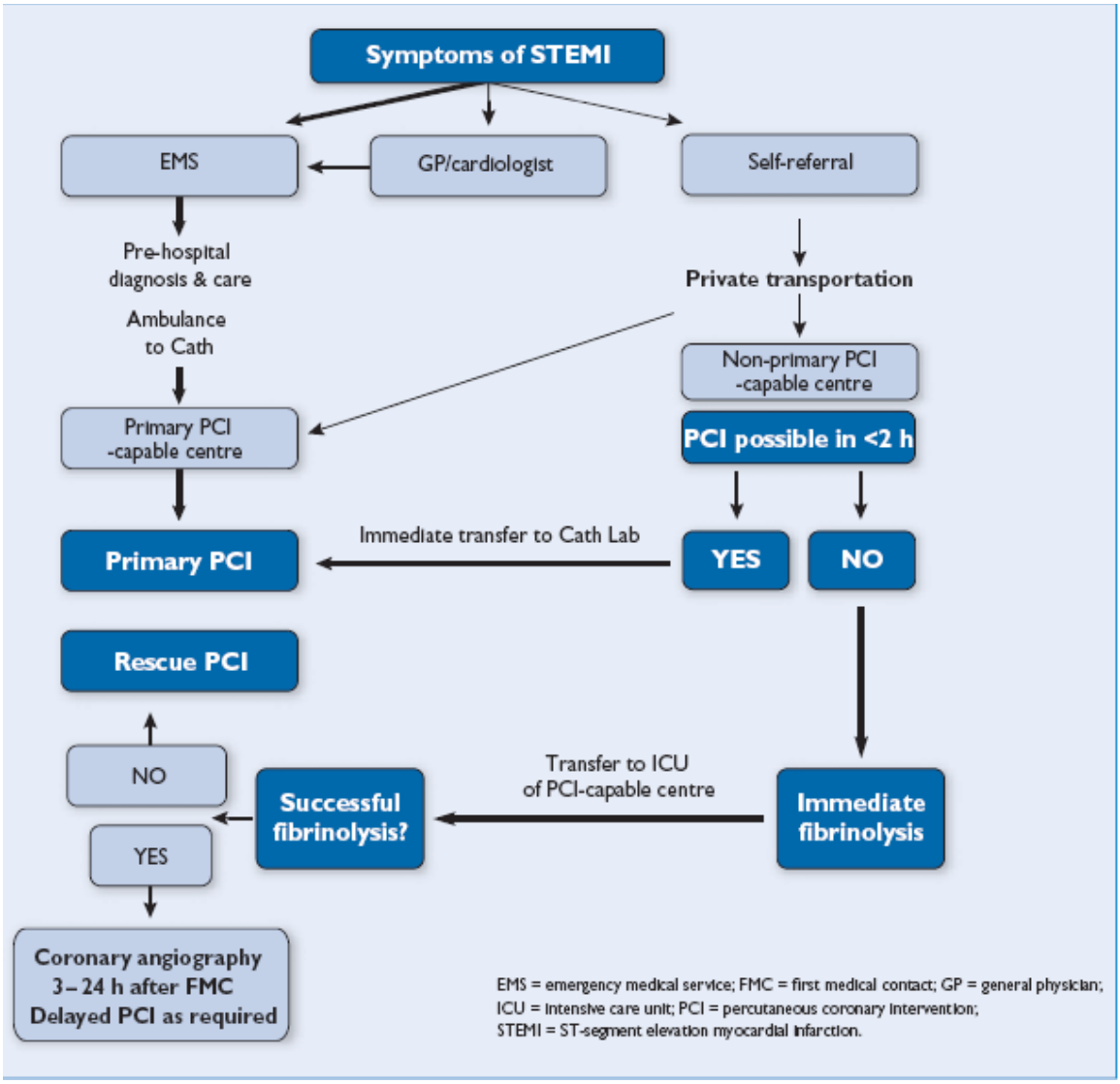
Choice of reperfusion therapy is also affected by the patient's risk of bleeding. When both types of reperfusion are available, the higher the patient's risk of bleeding with fibrinolytic therapy, the more strongly the decision favours PCI. If PCI is unavailable, then the benefit of pharmacological reperfusion therapy is balanced against the risk. STEMI patients presenting to a facility without the capability for expert, prompt intervention with primary PCI within 90 minutes of first medical contact undergo fibrinolysis unless contraindicated.

Primary percutaneous coronary intervention (PCI)

Primary PCI is defined as percutaneous intervention in the setting of STEMI without previous or concomitant fibrinolytic treatment. RCTs and meta-analyses comparing primary PCI with in-hospital fibrinolytic therapy in patients within 6–12 h after symptom onset treated in high-volume, experienced centres have shown more effective restoration of vessel patency, less re-occlusion, improved residual LV function, and better clinical outcome with primary PCI [72] Cities and countries switching from fibrinolysis to primary PCI have observed a sharp decrease in mortality after STEMI [73,74.]

American College of Cardiology/American Heart Association (ACC/AHA) guidelines specify that primary PCI should be performed by operators who perform [75] elective procedures per year and at least 11 procedures for STEMI in institutions with an annual volume of >400 elective and >36 primary PCI procedures[76]. Such a policy decision is justified by the strong inverse volume-outcome relationship observed in high-risk and emergency PCI. Therefore, tolerance of low-volume thresholds for PCI centres for the purpose of providing primary PCI is not recommended. It is essential to make every effort to minimize all time delays, especially within the first 2 h after onset of symptoms, by the implementation of a

system of care network. As illustrated in Figure below, the preferred pathway is immediate transportation of STEMI patients to a PCI-capable centre offering an uninterrupted primary PCI service by a team of high-volume operators. Patients admitted to hospitals without PCI facilities should be transferred to a PCI-capable centre and no fibrinolytics should be administered if the expected time delay between first medical contact (FMC) and balloon inflation is <2 h. If the expected delay is >2 h (or >90 min in patients <75 years old with large anterior STEMI and recent onset of symptoms), patients admitted to a non-PCI centre should immediately receive fibrinolysis and then be transferred to a PCI-capable centre where angiography and PCI should be performed in a time window of 3–24 h.[77-80]



Ref [81]

Organization of ST-segment elevation myocardial infarction patient pathway describing pre- and in-hospital management and reperfusion strategies within 12 h of first medical contact.

SPECIFIC CONSIDERATION

A Primary PCI should be performed as quickly as possible, with a goal Of medical contact-to-balloon or door-to-balloon time of with in 90 minutes.

B If the symptom duration is within three hours and the expected door-balloon time minus the expected door-to-needle time is:

i) With in 1 hour, primary PCI is generally preferred.

ii) greater than 1 hour, fibrinolytic therapy (fibrin-specific agents) is generally preferred.

C If symptom duration is greater than 3 hours, primary PCI is generally preferred and should be performed with a medical contact-to-balloon or door-to-balloon time as brief as possible, with a goal of within 90 minutes.

D Primary PCI should be performed for patients younger than 75 years old with ST elevation or LBBB who develop shock within 36 hours of MI and are suitable for revascularization that can be performed within 18 hours of shock, unless further support is futile because of the patient's wishes or contraindications/unsuitability for further invasive care.

E Primary PCI should be performed in patients with severe congestive heart failure (CHF) and/or pulmonary edema (killip class 3) and onset of symptoms within 12 hours.

F The medical contact-to-balloon or door-to-balloon time should be as short as possible (i.e., goal within 90 min). Primary PCI is reasonable for selected patients 75 years or older with ST elevation or LBBB or who develop shock within 36 hours of MI and are suitable for revascularization that can be performed within 18 hours of shock. Patients with good prior functional status who are suitable for revascularization and agree to invasive care may be selected for such an invasive strategy.

It is reasonable to perform primary PCI for patients with onset of symptoms within the prior 12-24 hours and 1 or more of the following:

a. severe CHF

b. Hemodynamic or electrical instability

c. Persistent ischemic symptoms

Pharmaco-invasive therapy

The logistic difficulties of implementing primary PCI in routine practice coupled with evidence of benefit of prehospital fibrinolysis (especially if administered early after the onset of symptoms) and the overarching importance of time to reperfusion regardless of strategy used serve as the foundation for developing a unified approach to management of patients with STEMI in the future[88-90] . More than one decade ago, clinicians were discouraged from proceeding to PCI early after fibrinolysis because of lack of benefit of such a strategy and a trend toward worse outcomes in several trials [91-93]. Given the advances in PCI described above and clinical experience in contemporary practice, early referral for PCI is not only less concerning today but is scientifically appealing. The benefits of the synergy of a pharmacological approach followed by PCI have been described by Dauerman and Sobel[94]. Shortening the time to reperfusion of the infarct artery by prompt initiation of pharmacological reperfusion (either before hospitalization or in the emergency department of any hospital) followed by early PCI to consolidate the initial reperfusion process and prevent reocclusion of the infarct artery may be the optimal reperfusion strategy for patients with STEMI. Two new trials support the use of pharmaco-invasive therapy are: the CARESS-in-AMI trial [75]and the TRANSFER-AMI trial[76].

Cardiac Enzyme Release

Measurement of cardiac enzyme release had become an integral part of the retrospective diagnosis of myocardial infarction, and the peak concentrations are

useful in the process of risk stratification. In general, though, they have not proved very useful for immediate decision making in the management of acute myocardial infarction. A single measurement is not useful and even sequential measurements are difficult to interpret as the shape of the release curve relates to the time from onset of infarction (which is very variable) and to the thrombolytic agent used. There was considerable interest in biochemical tests for diagnosing failed thrombolysis. These included creatine kinase isoenzyme [82-84], troponin T[83] or I[84], fatty acid binding proteins and myoglobin[82-84]. Despite the high sensitivities and specificities described, none of these tests found favour in routine practice or were subjected to a prospective analysis in which the results influenced clinical decisions. Frequent blood sampling is often required and the determination of reperfusion sometimes depends on complex mathematical models.

Reperfusion treatment in acute myocardial infarction aims at early and sustained reperfusion of the myocardium at risk. PCI is associated with better outcomes than thrombolytics in the form of lower mortality, lower rate of nonfatal reinfarction and almost no risk of hemorrhagic stroke. The benefit is in all age groups and the elderly benefit more so than the younger groups. The time from symptom onset (to hospital presentation) to PCI is important with greatest benefit if occurring within 90 minutes. It is a treatment that is available to most patients including those in cardiogenic shock and high bleeding risk. PCI has the added benefit of identifying patients with coronary disease that would be conducive to coronary artery bypass grafting. The long and short answer now is that if PCI is available, multiple studies have shown enhanced survival compared to thrombolysis with a lower rate of intracranial hemorrhage and recurrent MI. Therefore, patients that present with STEMI or MI with new onset LBBB consistent within 12 hours of symptom onset should move to PCI. Despite this strong evidence, patients with STEMI and no

contraindications, reperfusion therapy is underutilized and often not administered in a time dependent manner.[85]

Data regarding revascularization in STEMI from India came from study by Jose et al [86] and CREATE study [87]. The study by Jose et al was a single centre study done in CMC Vellore. It enrolled 1320 patients with STEMI with mean age of 56±13. Males comprised of 83.6% of patients and 82.8% of patients underwent reperfusion only by means of thrombolysis. CREATE registry which was a prospective registry done in 89 centres from 10 regions and 50 cities in India. It enrolled 20937 patients out of which 12405 (60·6%) had STEMI. The mean age of these patients was 57·5 (SD 12·1) years. Most patients were from lower middle 10,737 (52·5%) and poor 3999 (19·6%) social classes. The median time from symptoms to hospital was 360 (inter-quartile range 123–1317) min, with 50 (25–68) min from hospital to thrombolysis. 6226 (30·4%) patients had diabetes; 7720 (37·7%) had hypertension; and 8242 (40·2%) were smokers. Percutaneous coronary interventions was used in 8·0% in STEMI. Thrombolytics (96·3% streptokinase) were used for 58·5% of patients with STEMI.

MATERIAL AND METHODS

Setting: The study was done in Vellore, which is a tier 3 South Indian city. This is a single centre study done in the Cardiology department of Christian Medical College, a tertiary care centre. The Department of Cardiology is equipped with all the required facilities for tackling cardiac emergencies and primary PCI. The cardiac catheterization laboratory was established almost 45 years back. The cardiac catheterization laboratory and interventional cardiologists are available round the clock. The department caters around 700-800 patients of acute ST elevation myocardial infarction per year.

Participants: All patients of any age who were presented with acute STEMI were included in the study. Patients coming with STEMI are usually local with poor socioeconomic status. Affordability of interventional procedures is always a problem. As Vellore district covers a large rural population, awareness among people about coronary artery disease and the recent advances in treatment is deficient.

Variables: The number of patients thrombolysed with streptokinase, tenecteplase or undergoing primary PCI was determined. Their percentages, mean and standard deviations were calculated. The data was scrutinized for the trends in revascularization. Please see the data collection sheet enclosed.

Data Sources/measurement: Data were collected from the patient inpatient and outpatients records as well as the records in the coronary care unit (CCU)/chest pain unit (CPU). Patients were divided into age groups of 20- 39, 40-59, 60-79 & >80 years. Other variables that were taken into accounts includes age, gender and risk factors for coronary artery disease. The number of patients not revascularised and the reasons for the same were also studied.

Bias- It is a retrospective study

Sample size: Sample size was calculated using the formula $4PQ/D^2$, used in the CREATE study. P is percentage of patient revascularised in the previous study. Q is 100-P. D is taken as error.

Sample size was determined to be 388 in this study

OBSERVATIONS AND RESULTS

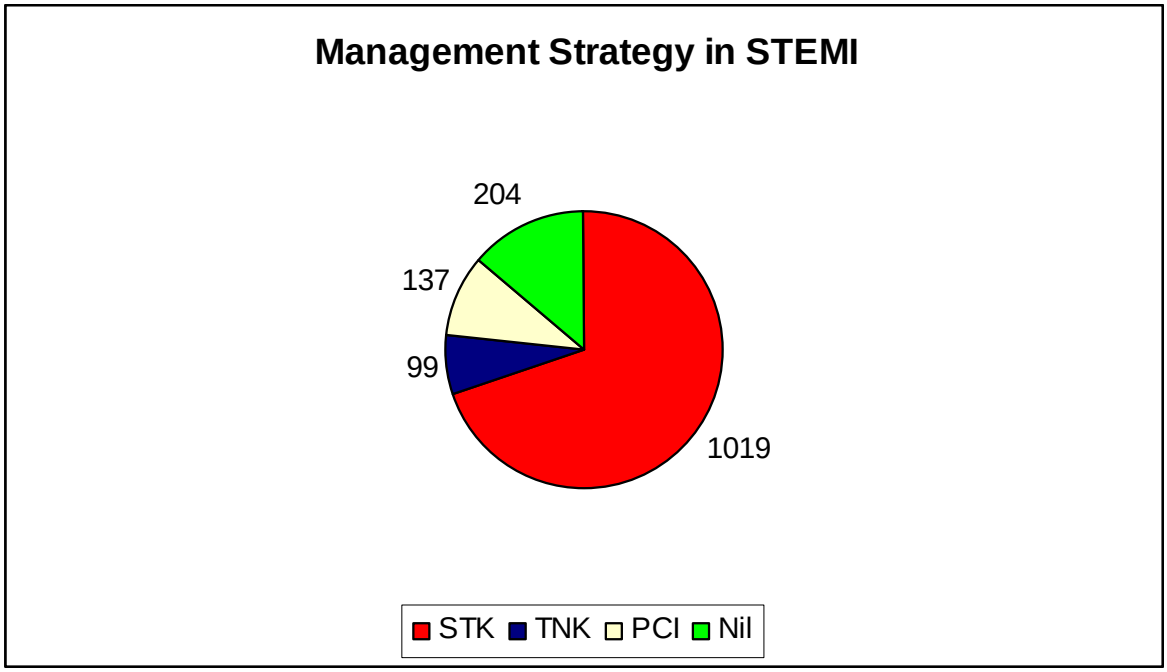
Between 1st August 2008 and 31st July 2010 a total of 1459 patients with ST- segment elevation myocardial infarction (STEMI) were enrolled into this study. The demographic characterstics of the patients is presented in table 1. The largest number of patients were in the age group of 40-59 years (313, 50%). Younger age group included 45 (7.2%) patients. 17 (2.7%) patients were >80years. 1255 (86%) of patients received some form of reperfusion therapy either by thrombolytic agent or PCI. **T**hrombolysis with streptokinase was the most common mode of reperfusion. 1019 (69.8%) of the total STEMI patients were reperfused with it. It was also the most common mode of reperfusion all age group categories.

Table I: Demographic Characterstics of patients

	STK lysis	TNK lysis	Primary PCI	Medical Rx	Total
Total	1019(69.8%)	99 (6.7%)	137(9.4%)	204 13.98%)	1459
Age 20-39	99(9.7%)	2(2%)	9 (6.56%)	10 (4.9%)	120(8.2%)
Age 40-59	520(51%)	39(39.4%)	75(54.7%)	91(44.6%)	725(50%)
Age 60-79	382(37.5%)	56(56.6%)	48 (35%)	89(43.6%)	575(39.4%
Age ?80	18(1.8%)	2 (2%)	5 (3.6%)	14(6.8%)	39(2.7%)
Age mean±SD	58.8±13	61± 9.4	55.6 ±12	58±12	56.3± 11.8
Male	852(83.6%)	86 (86.8%	122(89%)	154(75.5%)	1214(83%)
Female	167(16.3%)	13(13.1%)	15(11%)	50 (24.5%)	245(17%
AWMI	593(58.2%)	63(63.6%)	91(66.4)	146 (71.5%)	893(61.2%)
IMI	410(40.2%)	35(35.3%)	46(33.57%)	53 (26%)	544(37.2%
Other MI	16(1.57%)	1 (1%)	Nil (0%)	5 (2.45%)	22(1.5%)
DM	509(50%)	47(48%)	74(54.1%)	95 (46.6%)	725(49.7%)
Hypertension	335(32.9%)	41(42%)	49(36%)	75(36.6%)	500(34%)
Dyslipidemias	750(73.8%)	57(57.7%)	114(83.6%)	152(74.4%)	1073(73%)
Smoking *	312(30.7%)	41(42%)	47(34.4%)	52 (25.5%)	452(31%)

*Data are number (%) or ± Standard deviation
*IWI includes Inferior & all other combinations (eg. Right ventricular, Posterior wall, Lateral wall)
*AWMI includes anterior, antero-septal, anterolateral, extensive anterior wall STEMI
* Others includes High lateral ST elevation myocardial infarction, Isolated lateral or posterior wall STEMI
* Includes both current/exsmoker

Fig: 1



This was followed by primary PCI which was used in total of 137 patients (9.4%). The age group in which this modality was most utilized was 40-59 years (75, 54.7%). Patients with age >80years were least benefited by PCI (3.6%) followed by age group 20-39 years (6.56%).Tenecteplase was used in 99 (6.7%) patients. 204 (13.8%) did not receive any form of reperfusion for various reasons. The most common reason for not receiving reperfusion therapy was late presentation in 175 (85.7%) patients followed by cardiogenic shock or death in 25 (12.2%). There were 4 patients who were denied thrombolytic agents because of contraindications for thrombolysis. 3 patients had either recent or associated cerebrovascular accident and 1 patient had an associated pericardial effusion.

Table 2: Reasons for not utilizing reperfusion therapy

Reasons	Number (n=204)
Late presentation	175(85.7%)
Cardiogenic shock and death prior to instituting reperfusion	25 (12.2%)
Pericardial effusion	1 (.5%)
Cerebrovascular accidents	3 (2.2%)

Fig: 2

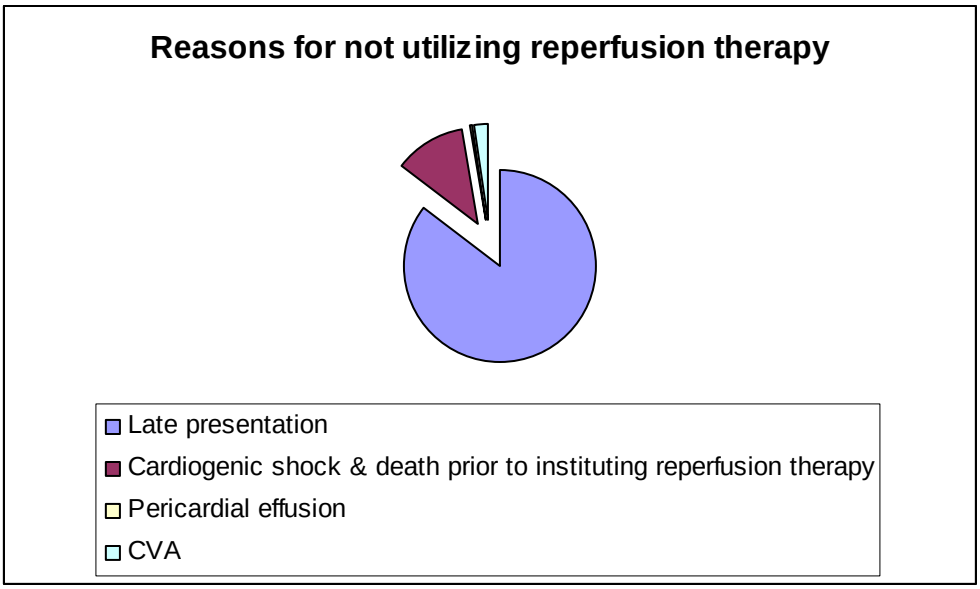
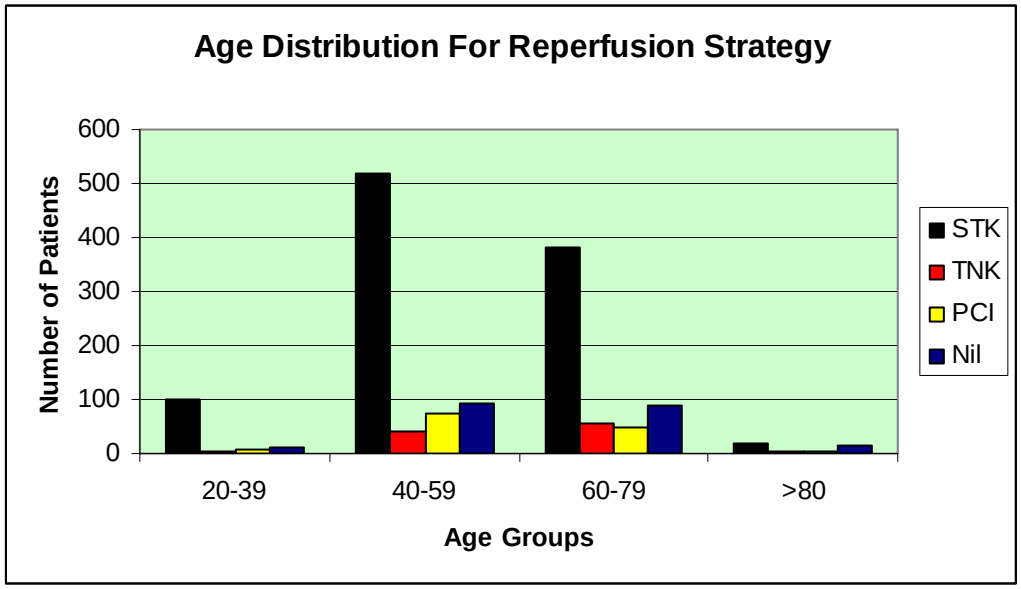


Table 3: Age Distribution of patients receiving different reperfusion strategies

Age groups	STK	TNK	PCI	Nil
20-39	99	2	9	10
40-59	520	39	75	91
60-79	382	56	48	89
>80	18	2	5	14

Fig 3:



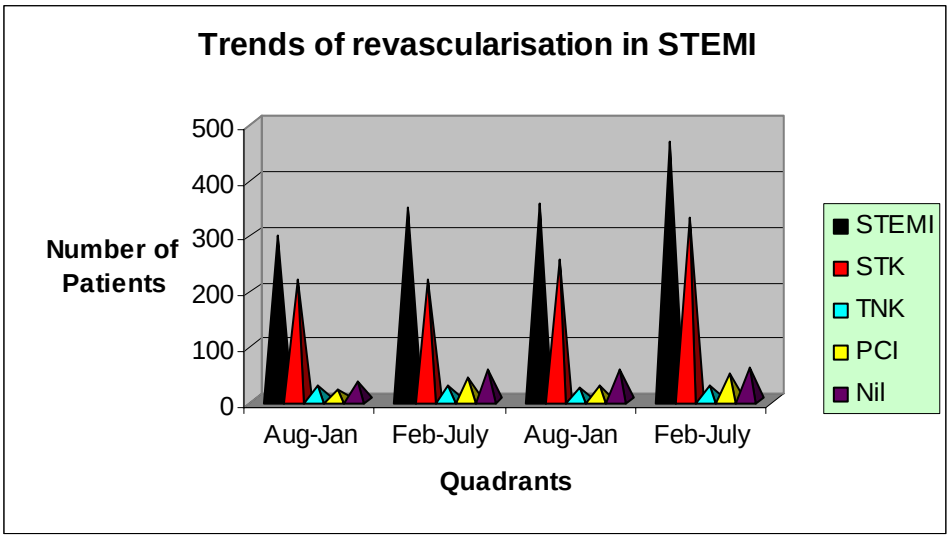
Mean age of patients in the whole study population was 56.3+ 11.8 years. Maximum patients were in the age groups of 40-59 years with least in >80 years.

Table 4: Trends of revascularization in STEMI

MONTHS *	Nil (%)	STK (%)	TNK (%)	PCI (%)	Total
1-6	35 (11.8)	216 (72.7)	27 (9.0)	19 (6.4)	297
7-12	55 (16.1)	219 (64.2)	25 (7.3)	42 (12.3)	341
13-18	55 (15.4)	253 (71.1)	21 (5.9)	27 (7.5)	356
19-24	59 (12.7)	331 (71.1)	26 (5.6)	49 (10.5)	465
Pvalue	0.075	0.000	0.840	0.001	0..000

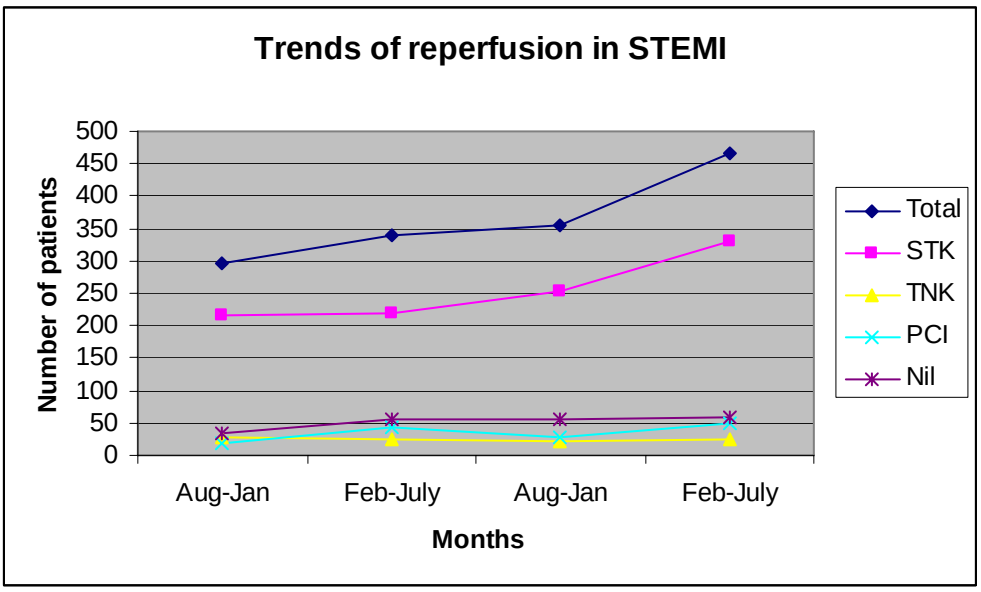
* Numbers represent months in serial order from July' 08 to June' 10

Fig 4:



Patients with STEMI increased progressively in every 6 months assessment. It was 297 patients to start with in 1st half-year which became 465 in the last half-year.

Fig : 5

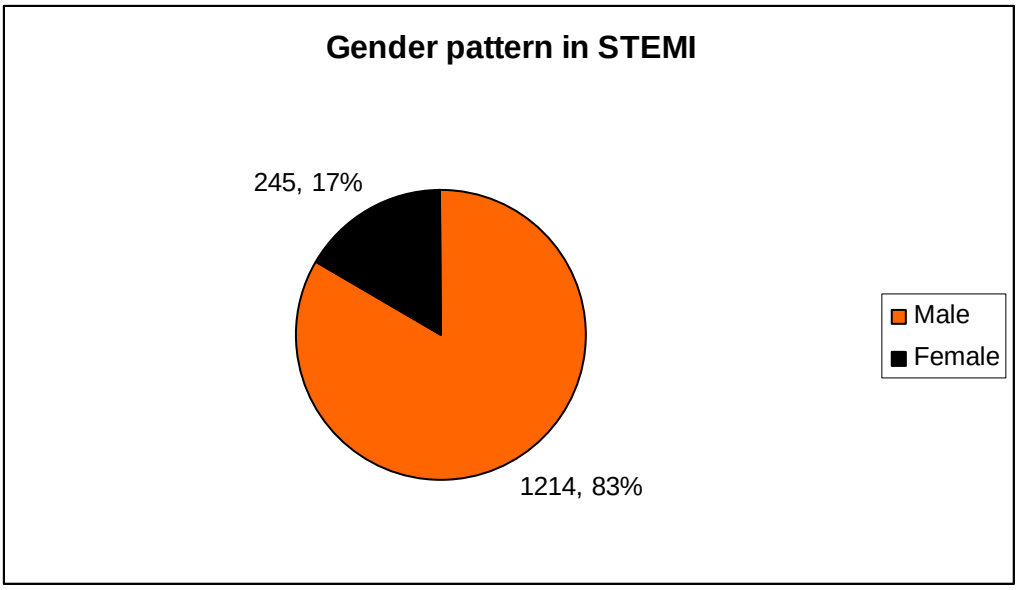


STK use as thrombolytic agent also followed the total STEMI trends. It was 216 in the first half-year and became 331 in the last half-year. (Table 5, Fig 5). The percentage of STEMI patients utilizing streptokinase as a thrombolytic agent remained constant throughout the study period and corresponded to the rise in patients of STEMI. Patient who did not receive any form of revascularization too increased from 32 in the first half-year to 59 in the last half-year. The use of tenecteplase remained almost the same throughout the four half-years. It was 27 in the 1st half-year and 26 in the last half-year.

Table 5: Gender Pattern in STEMI

Sex	Number Of Patients (%)
Male	1214 (83)
Female	245 (17)

Fig 6:

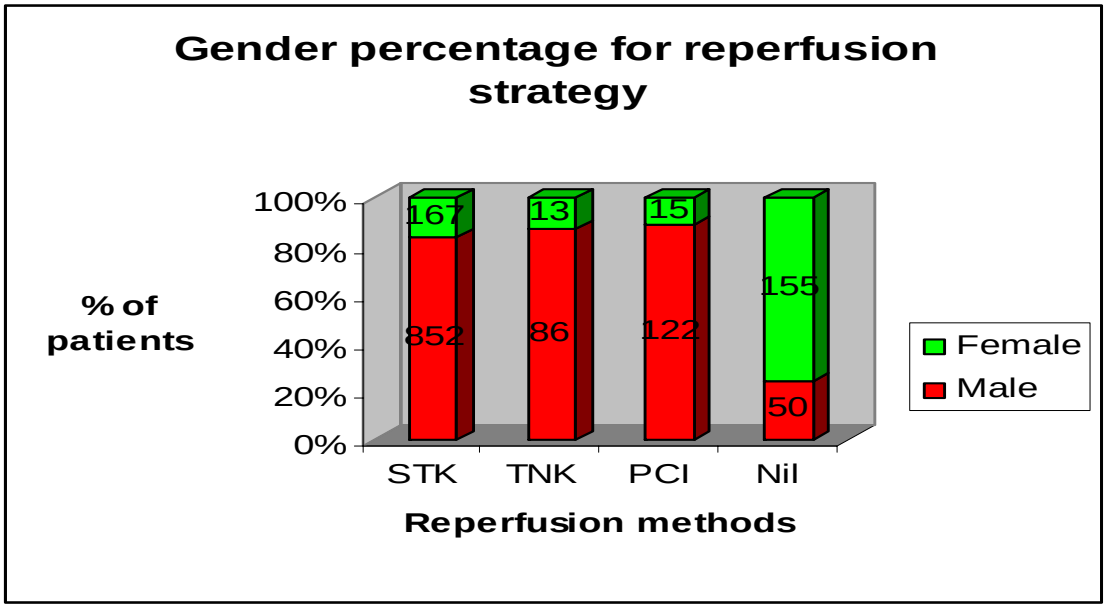


Males (1214, 83%) were involved more commonly than females (245, 17%).

Table 6: Gender Percentage for reperfusion strategy

Sex	STK (%)	TNK (%)	PCI (%)	Nil (%)
Male	852 (83.6)	86 (86.8)	122 (89)	50 (24.5)
Female	167 (16.3)	13 (13.2)	15 (11)	155 (75.5)

Fig : 7

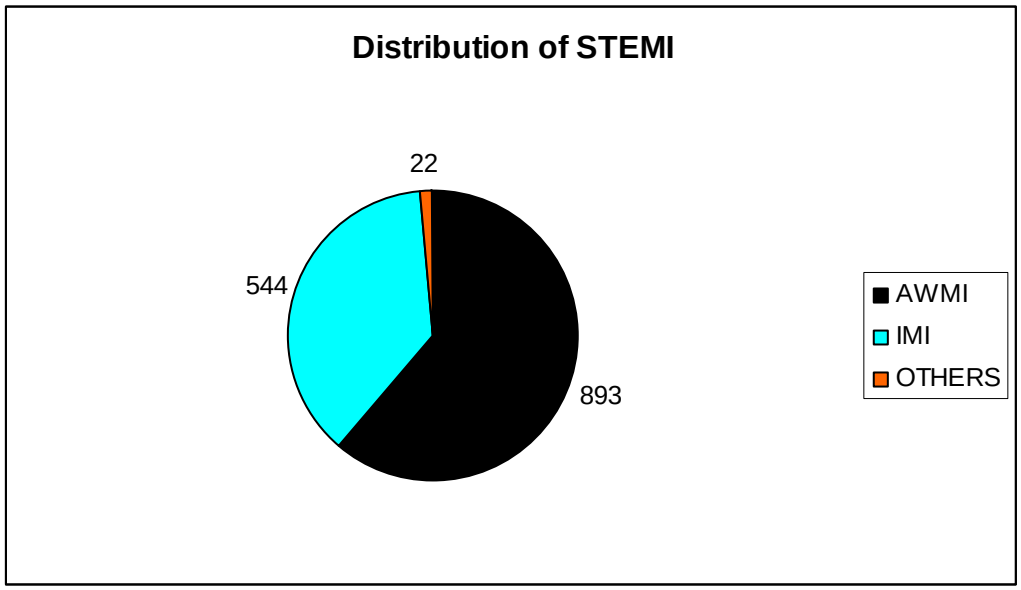


In all treatment groups the proportion of males was more than females. In the group of patients not reperfused, females were 50 (24.5%), for tenecteplase (13, 13%), PCI (15, 11%) and streptokinase 167 (16%).

Table 7: Distribution of STEMI

Type of STEMI	Number of Patients (%)
AWMI	893 (61.2)
IWMI	544 (37.3)
Others	22 (1.5%)

Fig: 8



Most common territory involved was anterior wall which constituted 893 (61%) patients. Inferior wall STEMI in various combination was 544 (37%. Other territories included high lateral, isolated posterior wall etc were 22 (1.5%).49.7% of the patients has type 2 diabetes mellitus. 73% of patients had some form of lipid abnormalities. 34% of the patients had hypertension. 31% of the patients were either current or ex-smoker. 60% of the patients have atleast $\geq$ 2 risk factors.

Table 8: Comparison of baseline characterstics and management strategy outcomes of patients enrolled in earlier study* from the same centre vs present study

Characterstics	Earlier study N=1320 (%)	Present study N= 1459 (%)
Age	56+ 13	56.3±11.8
Males	1106 (83.8)	1214 (83%)
Females	214 (16.2)	245 (17)
Smoking	569 (43.1)	452 (31)
Diabetes Mellitus	531 (40.2)	725 (49.7)
Hypertension	504 (38.2)	500 (34
Location of MI		
Anterior wall MI	752 (57)	893 (61.2)
Inferior wall MI	517 (39)	544 (37.2)
Reperfusion therapy		
Thrombolytics		
STK	1093 (82.8)	1019 (69.8)
TNK	Nil (0)	99 (6.7)
PCI	Nil (0)	137 (9.4)

Data are numbers (%) or mean ± SD

- Jose et al [86]

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DISCUSSION

Mean age of presentation of STEMI in present study was 56.3±11.8 years with majority of them being males (83%). In the study done by Jose et al, which included patients from 1999-2003 in the same centre and the CREATE registry which enrolled patients from 2001-2005, the mean age been 56±13 years and 57.5±12 years. This is suggesting that mean age of patients has not change over a decade even when comparing data from the same centre. Patients enrolled in this study presented a decade earlier in comparison to the western data where the mean age of presentation has increased from 64.1 years to 66.4 years. Early age of STEMI could lead to tremendous loss of productive years and can have a adverse outcome on the economy a well as national health.

It is noteworthy that only a small percentage of patients in younger age group of 20-39 years received PCI (6.5%) and tenecteplase (2%) as compared to the 40-59 years age group (PCI 54.7%, tenecteplase 39.4%) age group. This relates to the social status and financial means of the patients enrolled in the study. Younger patients who would be benefited the most in terms of productive life-years saved remain the least benefited by recent advances in reperfusion therapy.

In the present study, women comprised 17% of all patients, which was comparable to the proportion of women patients in the CREATE study (18%) and the study by Jose et al (16.2%). The data also highlighted the inferior treatment received by women in comparison to men, as of the patients who received PCI only 11% were women. Similarly, women comprised 13% of all STEMI patients who received tenecteplase as a thrombolytic agent.

Trends in STEMI :

There was steady increase in admissions of patients with STEMI over a period of 2 years which was divided into four half-years for analysis. There was almost 20% increase in the number of STEMI, if we compare the first two half-years with the last two. This increment raises serious concern that the incidence of STEMI is likely to be doubled in less than four years in the local population. There was increase of 34 % of STEMI patients from the first half-year to the last. There was also parallel increase in the number of patients thrombolysed with streptokinase. In the first half-year, streptokinase was used in 72% of patients of all STEMI. This percentage remained almost the same (71%) till the last half-year. So even though the numbers of patients of STEMI have increased, the role of streptokinase as the main thrombolytic agent has remained the same over the 2 years period of study. Streptokinase constituted 91% of all thrombolysed cases. This is in comparison to data from CREATE study in which thrombolytics (96 % streptokinase) were used for 58·5% of patients with STEMI and study of Jose et al in which 82.8% of patients received thrombolysis (all with streptokinase).

A very important result of this study was the analysis of patients who did not receive any reperfusion therapy because of various reasons. 14% patients of STEMI did not receive reperfusion therapy over the period of 2 years; there was 41% increase in the number of such patients between the 1st and the last half-years, which is very alarming considering that this number should ideally be expected to fall. In comparison, in the study by Jose et al 17.2% patient did not receive reperfusion therapy. So even a decade after the study by Jose et al, the reperfusion therapy usage in STEMI has only marginally increased. The most important reasons for no reperfusion therapy usage was late presentation (85.7%) (Table 2, fig 2). There were many reasons for this, such as late diagnosis and referral, poor

transport facilities and lack of awareness in the general population. Even though, females formed only 17% of all STEMI patients, they constituted 25 % of patients not receiving reperfusion therapy. So reperfusion therapy usage rates were lower in female patients as compared to males.

Cardiogenic shock and death prior to instituting reperfusion therapy (12.2%) was the second most common cause for not receiving reperfusion therapy. These patients could have been treated with primary PCI, if they could have afforded it. High cost of PCI procedures and its non-availability even in some tertiary care centres remains one of the important draw backs in management of STEMI in India.

There were 3 patients who had an absolute contraindication to thrombolytic therapy. Two of them had a recent cerebrovascular accident and one had a concurrent large ischemic stroke. One patient was not offered thrombolysis in view of large associated pericardial effusion. PCI would have been the best option in these of patients, if they could afford it. Tenecteplase was used in 6.7% of patients, where as in the study by Jose et al study the only thrombolytic used was streptokinase. The number of patients who were thrombolysed with tenecteplase remained almost same in the four half-years studied (Table 4, Fig 4). Tenecteplase was used in 9% of all STEMI patients in the first half-year compared to only 5.6% in the last (Table 4). The cost of tenecteplase was the reason for fewer patients being thrombolysed with it. The cost of tenecteplase in our centre is 7-8 times that of streptokinase. Interestingly, it was found that most of the patients who could afford tenecteplase, could afford PCI as well and so opted for the latter. So if tenecteplase is to replace streptokinase as a thrombolytic agent in India, its price has to come down significantly.

Primary PCI was used in 9.4% of patients as a reperfusion modality. There was 20% increase in primary PCI between first and 2nd year of study. In the 1st

half-year PCI was used only in 6.3% of all STEMI patients and this percentage increased to 10.5% in the last half-year. So even though the percentage of primary PCI between 1st and the last half-year has almost doubled, this may not be adequate considering 34% increase in the rates of STEMI hospitalizations during this period.

This study also analyzed the main risk factors for CAD prevalent in the Indian population. Diabetes mellitus was found in 49.7% of patients; systemic hypertension was found in 34%; 31% of patients were either current or ex-smokers and 73% of patients had some form of dyslipidemia. This data is different from data from CREATE study where 34% patients had diabetes; 37·7% had hypertension; and 40·2% were smokers. Study from Jose et al from the same centre as the present study a decade back showed 40.2% prevalence of diabetes in STEMI patients. So data the from present study demonstrates an increase in the proportion of patients with diabetes as compared to the past studies and suggest a strong correlation of diabetes mellitus with coronary artery disease.

There were many differences between the present study and the study by Jose et al and the CREATE registry. The study by Jose et al was done a decade ago in the same centre as the present study. Thrombolysis with streptokinase was the only mode of reperfusion in patients of STEMI, where as in the present study STK is considered as a last option for reperfusion therapy after PCI and tenecteplase. Data on gender and territory of MI has remained almost the same in the two studies. Prevalence of diabetes mellitus has increased 10% in STEMI patients over a decade which may be the reason for increased number of patients presenting with STEMI in the present study. The present study differed from the CREATE registry as it is a single-center study as compared to the multi-centre CREATE registry.

The present study highlights the current scenario of STEMI and its management in a tier 3 South Indian city. Even with a tertiary care centre with cardiac catheterization laboratories and experience cardiologists available 24 hours

a day, the rates of primary PCI has been low. Many reasons are responsible for this. The most important being the financial constraints of the patients; most patients in India pay for emergency medical expenses themselves and lack insurance cover.

Lack of awareness in general population and poor referral and transport has an important role to play. Increasing the numbers of tertiary cardiac centres alone is unlikely to be sufficient to improve the management of STEMI; the efforts have to be made in all directions.

Conclusions

1. : Patients with STEMI in this study are decade younger than western population
2. : 20% increase in STEMI every year in the studied population.
3. : Younger patients least likely to get primary PCI or tenecteplase as reperfusion therapy.
4. : 86% of patients received some form of reperfusion therapy. Streptokinase was the most common type of reperfusion therapy.
5. : Primary PCI rates increasing at 20% per year but still <10% STEMI patients receive it.
6. : Tenecteplase is a better replacement for streptokinase was used in less than 10% due to its high cost.
7. : 1 in 8 patients of STEMI didn't receive reperfusion therapy. Most common reason for not receiving reperfusion therapy was late presentation.
8. : Almost 50% of STEMI patients had diabetes mellitus.
9. : $3/5^{th}$ of STEMI were anterior wall STEMI.

REFERENCES

1. Lopaze AD, Mathers CD, Ezzati M, Jamison DT, Murray CJ. Global and regional burden of disease and risk factors, 2001: systematic analysis of population health data. Lancet 2006; 367:1747-57.
2. Yusuf S, Reddy S, Ounpuu S, Anand S. Global burden of cardiovascular diseases: Part II: variations in cardiovascular disease by specific ethnic groups and geographic regions and prevention strategies. Circulation 2001;104: 2855-65.
3. Gaffar A, Reddy KS, Singhi M. Burden of non-communicable diseases in South Asia. BMJ 2004;328:807-10.
4. Fox KA, Goodman SG, Klein W, et al. Management of acute coronary syndromes. Variations in practice and outcome; findings from the Global registry of Acute Coronary Events (GRACE). Eur Heart J 2002; 23:1177-89.
5. Mandelzweig L, Battler A, Boyko V, et al. The second Euro Heart Survey on acute coronary syndrome: characteristics, treatment, and outcome of patients with ACS in Europe and Mediterranean Basin in 2004. Eur Heart J 2006; 27:2285-93.
6. Xavier D, Pais P, Devereaux PJ, Xie C, Prabhakaran D, Reddy KS, et al; CREATE registry investigators. Treatment and outcomes of acute coronary syndromes in India (CREATE): a prospective analysis of registry data. Lancet 2008; 371:1435- 42.
7. Antman EM, Anbe DT, Armstong PW, Bates ER, Green LA, Hand M, et al. ACC/AHA guidelines for the management of patients with ST-

elevation myocardial infarction; A report of the American college of Cardiology/American Heart Association Task Force on Practice Guidelines (Committee to Revise the 1999 Guidelines for the management of Patients with Acute Myocardial Infarction). J Am Coll Cardiol. 2004;44:E1- E211.

8 A Budaj, D Brieger and PG Steg *et al.*, Global patterns of use of antithrombotic and antiplatelet therapies in patients with acute coronary syndromes: insights from the Global Registry of Acute Coronary Events (GRACE), *Am Heart J* **146** (2003), pp. 999–1006.

9 KA Fox, SG Goodman and W Klein *et al.*, Management of acute coronary syndromes. Variations in practice and outcome; findings from the Global Registry of Acute Coronary Events (GRACE), *Eur Heart J* **23** (2002), pp. 1177–1189.

10 PG Steg, RJ Goldberg and JM Gore *et al.*, Baseline characteristics, management practices, and in-hospital outcomes of patients hospitalized with acute coronary syndromes in the Global Registry of Acute Coronary Events (GRACE), *Am J Cardiol* **90** (2002), pp. 358–363.

11 CM Gibson, NRMI and current treatment patterns for ST-elevation myocardial infarction 5, *Am Heart J* **148** (2004), pp. 29–33.

12 WJ Rogers, JG Canto, HV Barron, JA Boscarino, DA Shoultz and NR Every, Treatment and outcome of myocardial infarction in hospitals with and without invasive capability. Investigators in the National Registry of Myocardial Infarction, *J Am Coll Cardiol* **35** (2000), pp. 371–379.

13 WJ Rogers, JG Canto and CT Lambrew *et al.*, Temporal trends in the treatment of over 1.5 million patients with myocardial infarction in the US from 1990 through 1999: the National Registry of Myocardial Infarction 1, 2 and 3, *J Am Coll Cardiol* **36** (2000), pp. 2056–2063.

14 S Yusuf, M Flather and J Pogue *et al.*, Variations between countries in invasive cardiac procedures and outcomes in patients with suspected unstable angina or myocardial infarction without initial ST elevation. OASIS (Organisation to Assess Strategies for Ischaemic Syndromes) Registry Investigators, *Lancet* **352** (1998), pp. 507–514.

15 D Hasdai, S Behar and L Wallentin *et al.*, A prospective survey of the characteristics, treatments and outcomes of patients with acute coronary syndromes in Europe and the Mediterranean basin; the Euro Heart Survey of Acute Coronary Syndromes (Euro Heart Survey ACS), *Eur Heart J* **23** (2002), pp. 1190–1201.

16 L Mandelzweig, A Battler and V Boyko *et al.*, The second Euro Heart Survey on acute coronary syndromes: Characteristics, treatment, and outcome of patients with ACS in Europe and the Mediterranean Basin in 2004, *Eur Heart J* **27** (2006), pp. 2285–2293.

17 E George, D Savitha and P Pais, Pre hospital issues in acute myocardial infarction, *J Assoc Physicians India* **49** (2001), pp. 320–323.

18 E George, S Hunsberger, D Savitha and P Pais, Treatment of acute myocardial infarction: does the type of hospital make a difference? PPAMI Study Group, *Indian Heart J* **51** (1999), pp. 161–166.

19 VJ Jose and SN Gupta, Mortality and morbidity of acute ST segment elevation myocardial infarction in the current era, *Indian Heart J* **56** (2004), pp.

20 Preventing chronic disease: a vital investment. Geneva, World Health Organization, 2005.

21 The World Health Report 2002. Reducing risks, promoting healthy life. Genava, World Health Organization,2002.

22 Sharma M, Ganguly NK. Premature coronary artery disease in Indians and its associated risk factors. Vasc Health Risk Manag 2005;1:217-25.

23 Murry CJL, Lopez AD. Mortality by cause for eight regions of the world: global Burden of Disease Study. Lancet 1997;349: 1269-1276.10–214.

24 World Health Report. Mental Health: New Understanding, New Hope. Geneva, Switzerland: World Health Organization; 2001:144-149

25 Enas EA, Garg A, Davidson MA, et al. Coronary heart disease and its risk factors in the first generation immigrant Asian Indians to the United States of America. Indian Heart J 1996; 48:343-54.

26 Enas EA, Yusuf S. Third meeting of the International Working Group on Coronary Artery Disease in South Asians. Indian Heart J 1999; 51: 99-103.

27 Ghaffar A, Reddy KS, Singhi M. Burden of non-communicable diseases in South Asia. BMJ2004;328:807-10.

28 Enas EA, Dhawan J, Petker S. Coronary artery disease in Asian Indians: lessons learnt and the role of lipoprotein-a. Indian Heart J 1996; 49: 25-34.

29 Destefano F, Merrit RK, Anda RF. Trends in coronary heartdisease in the US, 1980 through 1989. Arch Intern Med1993; 153: 2489-94.

30 Bhatia ML. Prevalence of CAD in India: A contemporary view. Indian Heart J 1995; 47: 339-42.

31 HS Rissam*, S Kishore*, N Trehan*Journal, Indian Academy of Clinical Medicine _ Vol. 2, No. 3 _ July-September 2001

32 Yusuf S, Hawken S, Ounpuu S, et al. Effect of potentially modifiable risk factors associated with myocardial infarction in 52 countries (the INTERHEART study): case-control study. Lancet 2004; 364:937-52..

33 S.P. Singh, P. Sen Indian J Prev. Soc. Med Vol.

34 a b Moe KT, Wong P (March 2010). "Current trends in diagnostic biomarkers of acute coronary syndrome". Ann. Acad. Med. Singap. 39 (3): 210–5.

35 a b Tsujita K, Kaikita K, Soejima H, Sugiyama S, Ogawa H (April 2010). "[Acute coronary syndrome-initiating factors]" (in Japanese). Nippon Rinsho 68 (4): 607–14. PMID 20387549

36 Woollard KJ, Geissmann F (February 2010). "Monocytes in atherosclerosis: subsets and functions". Nat Rev Cardiol 7 (2): 77–86. doi:10.1038/nrcardio.2009.228. PMID 20065951

37 Pearson TA, Mensah GA, Alexander RW, Anderson JL, Cannon RO 3rd, Criqui M, Fadl YY, Fortmann SP, Hong Y, Myers GL, Rifai N, Smith SC Jr, Taubert K, Tracy RP, Vinicor F; Centers for Disease Control and Prevention; American Heart Association. (2003). "Markers of inflammation and cardiovascular disease: application to clinical and public health practice: A statement for healthcare professionals from the Centers for Disease Control and Prevention and the American Heart Association".

38 A Fox, J Birkhead, R Wilcox, et al. Heart 2004 90: 603-609

39 Thygesen K, Alpert JS, White HD (October 2007). "Universal definition of myocardial infarction". Eur. Heart J. 28 (20): 2525–38. doi:10.1093/eurheartj/ehm355.PMID 17951287..

40 Alpert JS, Thygesen K, Antman E, Bassand JP. (2000). "Myocardial infarction redefined--a consensus document of The Joint European Society of Cardiology/American College of Cardiology Committee for the redefinition of myocardial infarction". J Am Coll Cardiol 36 (3): 959–69.

41 Mercado N, Poldermans D, Gardiens M, Vos J, Simoons ML. Acute myocardial infarction. Lancet 2003; 361: 847-58.

42 Sgarbossa EB, Pinski SL, Barbagelata A, et al. Electrocardiographic diagnosis of evolving acute myocardial infarction in the presence of left bundle-branch block. N Engl J Med 1996; 334:481-7

43 Goldberger AL. Goldberger: Clinical Electrocardiography: A Simplified Approach. 7th ed: Mosby Elsevier; 2006. 05

44 Steg PG, Bonnefoy E, Chabaud S, et al. Impact of time to treatment on mortality after prehospital fibrinolysis or primary angioplasty: data from the CAPTIM randomized clinical trial. *Circulation.* 2003; 108: 2851–2856

45 Bonnefoy E, Lapostolle F, Leizorovicz A, et al. Primary angioplasty versus prehospital fibrinolysis in acute myocardial infarction: a randomised study. *Lancet.* 2002; 360: 825–829.

46 Boersma E, Maas AC, Deckers JW, et al. Early thrombolytic treatment in acute myocardial infarction: reappraisal of the golden hour. *Lancet.* 1996; 348: 771–775.

47 De Luca G, Suryapranata H, Zijlstra F, et al. Symptom-onset-to-balloon time and mortality in patients with acute myocardial infarction treated by primary angioplasty. *J Am Coll Cardiol.* 2003; 42: 991–997.

48 TIMI Study Group. Comparison of invasive and conservative strategies after treatment with intravenous tissue plasminogen activator in acute myocardial infarction: results of the thrombolysis in myocardial infarction (TIMI) phase II trial. *N Engl J Med.* 1989; 320: 618–627.

49 Arnold AE, Simoons ML, Van de Werf F, et al. Recombinant tissue-type plasminogen activator and immediate angioplasty in acute myocardial infarction: one-year follow-up: the European Cooperative Study Group. *Circulation.* 1992; 86: 111–120

50 SWIFT (Should We Intervene Following Thrombolysis?) Trial Study Group. SWIFT trial of delayed elective intervention v conservative

treatment after thrombolysis with anistreplase in acute myocardial infarction. *BMJ*. 1991; 302: 555–560.

51 Ouriel K. A history of thrombolytic therapy. *J Endovasc Ther*. Dec 2004;11 Suppl 2:II128-133.

52 Sikri N, Bardia A. A history of streptokinase use in acute myocardial infarction. *Tex Heart Inst J*. 2007;34(3):318-27.

53 ISIS-2 (Second International Study of Infarct Survival) Collaborative Group. Randomised trial of intravenous streptokinase, oral aspirin, both, or neither among 17,187 cases of suspected acute myocardial infarction:ISIS-2 Lancet 1988; 2: 349-60.

54 Lew AS, Laramee P Cercek B, Saha PK, Ganz W. The hypotensive effect of intravenous streptokinase in patients with acute myocardial infarction. Circulation 1985;72: 1321-1326.

55 Topol EJ, Bell WR, Weisfeldt ML. Coronary Thrombolysis with recombinant tissue plasminogen activator in atherosclerotic thrombotic occlusion. J Am Coll Cardiol 1985; 5: 85-91.

56 Granger CB, Califf RM, Topol EJ. Thrombolytic therapy for acute myocardial infarction: a review. Drugs 1992; 44: 293-325

57 Carney RJ, Murphy GA, Brandt TR, Daley PJ, Pickering C, White HJ, McDonough TJ, Vermilya SK, Teichman SL, for the RAAMI Study investigators. Randomised angiographic trial of recombinant tissue-type plasminogen activator (alteplase) in myocardial infarction. J Am

58 Califf RM, Topol EJ, George BS, Boswick JM, Abbotsmith C, Sigmon KN, Candela R, Masek R, Kereiakes D, Hemorrahgic complications

associated with the use of intravenous tissue plasminogen activator in treatment of acute myocardial infarction. Am J Med 1988; 85: 353-359

59 Topol EJ, George BS, Kereiakes DJ, Candela RJ, Abbotsmith CW, Stump DC, Boswick JM, Stack RS, Califf RM, Comparison of two dose regimens of intravenous tissue plasminogen activator for acute myocardial infarction. Am J Cardiol 1988;61:723-728

60 TIMI Study Group. Comparison of invasive and conservative strategies after treatment with intravenous tissue plasminogen activator in acute myocardial infarction: results of the thrombolysis in Myocardial infarction (TIMI) Phase ll Trial. N Engl J Med 1989;320:618-627Wall TC, Califf RM, George BS, Ellis SG, Smaha JK, Kereiakes DJ, Worley SJ, Sigmon K, Topol EJ, Accelerated plasminogen activator does regimens for coronary thrombolysis. J Am Coll Cardiol 1992; 19: 482-489.

61 Cheserbro JH, Knatterud G, Robert R, et al. Thrombolysis in Myocardial infarction (TIMI) Trial Phase l: a comparison between intravenous tissue plasminogen activator and intravenous streptokinase: clinical findings through hospital discharge. Circulation 1987; 76: 142-154

62 Smalling RW, Bode C, Kalbfleisch J, Sens S, Limbourg P, Forycki F, HabibG, Feldman R, Hohnloser S, Seals A. A more rapid , complete, and stable coronary thrombolysis with bolus administration of reteplase compared with alteplase infusion in acute myocardial infarction. Circulation 1995; 91: 2725-2732.

63 Bode C, Smalling RW, Berg G, Burnett C, Lorch G, Kalbfleisch JM, Chernoff R, Christie LG, Feldman RL, Seals AA, Weaver wd, for the RAPID ll investigators. Randomized comparison of coronary thrombolysis achieved with double-bolus reteplase (recombinant tissue plasminogen activator) in patients with acute myocardial infarction. Circulation 1996; 94: 891-898.

64 The GUSTO-lll Investigators. An international, multicenter, randomized comparison of reteplase with alteplase for acute myocardial infarction. N Engl J Med 1997; 337: 1118-1123.

65 ASSENT-2 Investigators. Single-bolus tenectiplase compared with front-located alteplase in acute myocardial infarction: the ASSENT-2 double blind randomized trial. Lancet 1999; 354: 716-722.

66 Tenecteplase [package insert]. South San Francisco, CA: Genentech, Inc; 2000.

67 Van De Werf F, Adgey J, Ardissino D, et al. Single-bolus tenecteplase compared with front-loaded alteplase in acute myocardial infarction: the ASSENT-2 double-blind randomised trial. *Lancet*. August 1999;354(9180):716-22.

68 Sinnaeve P, Alexander J, Belmans A, et al. One-year follow-up of the ASSENT-2 trial: a double-blind, randomized comparison of single-bolus tenecteplase and front-loaded alteplase in 16,949 patients with ST-elevation acute myocardial infarction. *Am Heart J*. July 2003;146(1):27-32.

69 Boersma E, Maas AC, Deckers JW, Simoons ML. Early thrombolytic treatment in acute myocardial infarction: reappraisal of the golden hour. Lancet 1996; 348: 771-5.

70 Zeymer U, Tebbe U, Essen R, Harrmann W, Neuhaus KL, for the ALKK-Study Group. Influence of time to treatment on early infarct-related artery patency after different thrombolytic regimens. Am Heart J 1999;137:34-8.

71 Weaver WD, Cerqueira M, Hallstrom AP, et al. Prehospital-initiated thrombolytic therapy: the myocardial infarction Triage and intervention trial. JAMA 1993; 270: 1211-6.

72 Montalescot G, Cayla G, Collet JP, Elhadad S, Beygui F, Le Breton H, Choussat R,Leclercq F, Silvain J, Duclos F, Aout M, Dubois-Rande JL, Barthelemy O,Ducrocq G, Bellemain-Appaix A, Payot L, Steg PG, Henry P, Spaulding C,Vicaut E. Immediate vs delayed intervention for acute coronary syndromes: arandomized clinical trial. JAMA 2009;302:947–954.

73 Keeley EC, Boura JA, Grines CL. Primary angioplasty versus intravenous thrombolytic therapy for acute myocardial infarction: a quantitative review of 23 randomised trials. Lancet 2003;361:13–20.

74 Kalla K, Christ G, Karnik R, Malzer R, Norman G, Prachar H, Schreiber W,Unger G, Glogar HD, Kaff A, Laggner AN, Maurer G, Mlczoch J, Slany J,Weber HS, Huber K. Implementation of guidelines improves the standard of care: the Viennese registry on reperfusion strategies in ST-elevation myocardial infarction (Vienna STEMI registry). Circulation 2006;113:2398–2405.

75 Zahn R, Schiele R, Schneider S, Gitt AK, Wienbergen H, Seidl K, Bossaller C, Buttner HJ, Gottwik M, Altmann E, RosahlW, Senges J. Decreasing

hospital mortality between 1994 and 1998 in patients with acute myocardial infarctiontreated with primary angioplasty but not in patients treated with intravenous thrombolysis. Results from the pooled data of the Maximal Individual Therapyin Acute Myocardial Infarction (MITRA) Registry and the Myocardial InfarctionRegistry (MIR). J Am Coll Cardiol 2000;36:2064–2071.

76 76. Smith SC Jr, Feldman TE, Hirshfeld JW Jr, Jacobs AK, Kern MJ, King SB III,Morrison DA, O'Neil WW, Schaff HV, Whitlow PL, Williams DO,Antman EM, Adams CD, Anderson JL, Faxon DP, Fuster V, Halperin JL,Hiratzka LF, Hunt SA, Nishimura R, Ornato JP, Page RL, Riegel B. ACC/AHA/SCAI 2005 guideline update for percutaneous coronary intervention: a reportof the American College of Cardiology/American Heart Association TaskForce on Practice guidelines (ACC/AHA/SCAI Writing Committee to Update2001 Guidelines for Percutaneous Coronary Intervention). Circulation 2006;113:e166–e286.

77 Cantor WJ, Fitchett D, Borgundvaag B, Ducas J, Heffernan M, Cohen EA,Morrison LJ, Langer A, Dzavik V, Mehta SR, Lazzam C, Schwartz Casanova A, Goodman SG. Routine early angioplasty after fibrinolysis acute myocardial infarction. N Engl J Med 2009;360:2705–2718.

78 Di Mario C, Dudek D, Piscione F, Mielecki W, Savonitto S, Murena E,Dimopoulos K, Manari A, Gaspardone A, Ochala A, Zmudka K, Bolognese L, Steg PG, Flather M. Immediate angioplasty versus standard therapy withrescue angioplasty after thrombolysis in the Combined Abciximab Reteplase Stent Study in Acute Myocardial Infarction (CARESS-in-AMI): an open, prospective,randomised, multicentre trial. Lancet 2008;371:559–568.

79 Fernandez-Aviles F, Alonso JJ, Castro-Beiras A, Vazquez N, Blanco J,Alonso-Briales J, Lopez-Mesa J, Fernandez-Vazquez F, Calvo I, Martinez-Elbal L, San Roman JA, Ramos B. Routine invasive strategy within 24 hours of thrombolysis versus ischaemia-guided conservative approach for acute myocardial infarction with ST-segment elevation (GRACIA-1): a randomised controlled trial. Lancet 2004;364:1045–1053.

80 Gershlick AH, Stephens-Lloyd A, Hughes S, Abrams KR, Stevens SE, Uren NG,de Belder A, Davis J, Pitt M, Banning A, Baumbach A, Shiu MF, Schofield P,Dawkins KD, Henderson RA, Oldroyd KG, Wilcox R. Rescue angioplasty after failed thrombolytic therapy for acute myocardial infarction. N Engl J Med2005;353:2758–2768.

81 The Task Force on Myocardial Revascularization of the EuropeanSociety of Cardiology (ESC) and the European Association forCardio-Thoracic Surgery (EACTS):European Heart Journal (2010) 31, 2501–2555

82 Laperche T, Steg PG, Benessiano J, et al. Patterns of myoglobin and MM creatine Idnase isoforms release early after intravenous thrombolysis or direct percutaneous transluminal coronary angioplasty for acute myocardial infarction, and implications for the early noninvasive diagnosis of reperfusion. Am J Cardiol 1992; 70: 1129-34.

83 Abe S, Aeima S, Yamashita T, et al. Early assessment of reperfusion therapy using cardiac troponin T. J Am Call Cardiol 1994; 23: 1382-89

84 Apple FS, Henry TD, Berger CR, Landt YA. Early monitoring of serum cardiac troponin I for assessment of coronary reperfusion following thrombolytic therapy. Am Clin Pathol 1996; 105: 6-10.

85 Eagle KA, Goodman SG, Avezum A, Budaj A, Sullivan CM, Lopez-Sendon J. Practice variation and missed opportunities for reperfusion in ST-segment-

elevation myocardial infarction: findings from the Global Registry of Acute Coronary Events (GRACE).*Lancet.* Feb 2 2002;359(9304):373-377

86 Jose VJ, Gupta SN. Mortality and morbidity of acute ST segment elevation myocardial infarction in the current era. Indian Heart Journal 2004; 56: 210-14

87 Treatment and outcomes of acute coronary syndromes in India (CREATE): a prospective analysis of registry data ; Lancet; Volume 361, Volume 9622, 26 April 2008-2 May 2008, Pages 1435-1442

88 Bonnefoy E, Lapostolle F, Leizorovicz A, et al. Primary angioplasty versus prehospital fibrinolysis in acute myocardial infarction: a randomised study. *Lancet.* 2002; 360: 825–829.

89 Boersma E, Maas AC, Deckers JW, et al. Early thrombolytic treatment in acute myocardial infarction: reappraisal of the golden hour. *Lancet.* 1996; 348: 771–775.

90 De Luca G, Suryapranata H, Zijlstra F, et al. Symptom-onset-to-balloon time and mortality in patients with acute myocardial infarction treated by primary angioplasty. *J Am Coll Cardiol.* 2003; 42: 991–997.

91 TIMI Study Group. Comparison of invasive and conservative strategies after treatment with intravenous tissue plasminogen activator in acute myocardial infarction: results of the thrombolysis in myocardial infarction (TIMI) phase II trial. *N Engl J Med.* 1989; 320: 618–627.

92 Arnold AE, Simoons ML, Van de Werf F, et al. Recombinant tissue-type plasminogen activator and immediate angioplasty in acute myocardial infarction: one-year follow-up: the European Cooperative Study Group. *Circulation.* 1992; 86: 111–120.

93 SWIFT (Should We Intervene Following Thrombolysis?) Trial Study Group. SWIFT trial of delayed elective intervention v conservative treatment after

thrombolysis with anistreplase in acute myocardial infarction. *BMJ*. 1991; 302: 555–560.

94 Dauerman HL, Sobel BE. Synergistic treatment of ST-segment elevation myocardial infarction with pharmacoinvasive recanalization. *J Am Coll Cardiol*. 2003; 42: 646–651.

DATA COLLECTION FORM

Patient Name-

Hospital No.-

Age-

Weight-

Sex-

Date of Admission-

Date of Discharge-

Baseline Parameters:

Reperfusion : Yes/No

PCI : Yes/No

Thrombolysis: STK/TNK

Chest pain to Reperfusion time:

Risk Factors: DM
HTN
Smoker
Dyslipidemia
Others

Infarct location: AWMI

IWMI

ASMI

LWMI

Others

Safety: Any bleeding

Stroke

Any other ADR

Reasons for no thrombolysis: Late presentation

Cerebrovascular accidents

Increase risk of bleeding

Pericarditis

Others

August 2008 MASTER CHART

NAME	A/S	H.NO	MI	LYSED	AGENT	DM	HTN	DYS	SMK
SADASIVAM	50/M	283485D	AWMI	YES	STK	-	-	-	+
ZOHARA BEE	67/F	172071D	AWMI	YES	STK	+	+	+	-
MANOHARAN	55/M	284103D	AWMI	YES	STK	+	+	-	-
SUBRAMANI	36/M	221421C	IW+RV	YES	STK	-	+	+	+
RATHAKRISHNAN	62/M	287032D	AWMI	YES	STK	+	+	+	-
VIJAYAN	51/M	307080C	LWMI	NO	-	-	+	-	-
KESAVAN	49/M	287067D	AWMI	YES	STK	+	-	-	-
DURAI SWAMY	61/M	287071D	AWMI	YES	STK	+	+	-	-
PALANI	36/M	528348C	IWMI	YES	STK	-	-	+	+
MAYAMMAL	60/F	287091D	IWMI	YES	STK	+	+	-	-
SELVAM	42/M	287205D	IW+RV+PW	YES	TNK	+	+	-	+
RAJU	72/M	287207D	ASMI	YES	STK		-	+	+
RATHINAM	90/M	287218D	AWMI	NO	TNK	+	-	+	-
PERSNANDAN	50/M	277052B	ASMI	YES	STK	-	-	-	+
MUNISWAMY	83/M	290003D	IW+RV+PW	NO	TNK	-	+	+	-
VIOLET JAMUNA	45/F	552259C	IWMI	NO	THK	+	+	-	-
RAMAKRISNAN	61/M	127986D	AWMI	YES	STK	-	-	+	+
Md YEHAYA	65/M	287275D	AWMI	YES	STK	+	+	-	-
NALINI	50/F	290203D	IW+RV	YES	STK	+	+	-	-
ARULAPPAN	65/M	290207D	IWMI	YES	STK	-	-	-	+
DHIRENDRA	55/M	286023D	AWMI	YES	STK	-	+	+	+
CHINNAIAH	47/M	293059D	LWMI	NO	-	-		-	
MOHAN RAJ	34/M	286023D	IW+RV	YES	STK	+	+	+	+
MAHADEB	44/M	295337D	IWMI	YES	STK	+		+	+
BASKARAN	40/M	294472D	AWMI	NO	-	-		-	-
PONNAPAN	58/M	295303D	ASMI	NO	-	+	+	+	-
SHANTHI	45/F	960884C	AWMI	NO	-	+	-	+	-
PURUSOTHMAM	86/M	489091B	IWMI	NO	-	+	-	+	-
PRABHU	40/M	295587D	IWMI	YES	STK	-	+	-	-
KUPPAM	54/M	365778B	AWMI	YES	STK	-	-	+	+
SRINIVASAN	47/M	767313C	IW+RV	NO	-	+	-	-	+
JOTHI	46/F	299038D	AWMI	YES	STK	+	+	-	-
NATARAJAN	58/M	299067D	IW+RV+PW	YES	STK	-	-	+	-
RAJA	52/M	299133D	IW+RV+PW	YES	STK	-	+	-	-
ELUMALAI	33/M	299204D	AWMI	YES	STK	-	+	-	+
YAMUNA BAI	59/M	299278D	IW+RV	YES	STK	-	+	-	-
KANNAN	62/M	303066D	ASMI	YES	STK	+	-	-	+
PITCHAI	51/M	302684D	AWMI	YES	STK	-	+	+	-
PERIYASWAMY	75/M	303735D	ASMI	YES	STK	+	+	-	-
SUBRAMANI	60/M	342740B	AWMI	YES	STK	+	+	-	+
RAGINI	45/F	303268D	AWMI	YES	STK	+	-	-	-

SEPTEMBER 2008

NAME	A/S	H.NO	MI	LYSED	AGENT	DM	HTN	DYS	SMK
KUPPAMAL	85/F	306024D	PW+RV	YES	STK	+	+	-	-
JAYARAMAN	64/M	700917B	AWMI	YES	STK	-	+	-	+
SALAMMAL	80/F	305561D	AWMI	NO	-	-	-	-	-
ANANDA	52/M	307622D	IWMI	YES	STK	+	-	-	-
JAGADEESAN	42/M	299274D	AWMI	YES	STK	-	+	-	+
SAMASIVAM	60/M	308013D	AWMI	NO	-	-	+	-	+
PANEERSELVAM	48/M	308025D	IW+RV	YES	STK	+	+	-	-
CHARLY VINCENT	34/M	308038D	ASMI	YES	STK	+	-	-	-
CHANDRASEKAR	51/M	308069D	AWMI	YES	STK	+	-	-	-
MANORAMAM	75/F	309489D	AWMI	YES	STK	-	-	+	-
RAJA N.	54/M	310124D	AWMI	YES	STK	+	-	-	+
SAROJA	63/F	649959B	AWMI	NO	-	+	+	+	-
BOOPALAN	50/M	311895D	ASMI	NO	-	-	-	-	+
NATHAN	70/M	311927D	AWMI	YES	STK	+	-	-	-
BEEMA RAJ	70/M	313283D	ASMI	YES	STK	+	-	-	+
ELUMALAI	40/M	311982D	IW+RV	YES	STK	-	-	-	+
KESAVAN	60/M	218195C	IW+PW+RV	YES	STK	+	+	-	-
SUBRAMANI	56/M	314008D	IW+RV+PW	NO	-	+	+	-	-
PARANTHAMAN	69/M	993358C	AWMI	YES	STK	+	-	+	-
SAROJA	56/F	314487D	IW+RV	NO	-	-	+	+	-

MANI	52/M	314025D	IW+RV	NO	-	+	-	+	+
KOKILA	56/F	601505C	AWMI	YES	STK	+	+	-	-
MOHAN	55/M	893280C	IW+RV	YES	STK	+	+	-	-
SURESH	32/M	317001D	AWMI	YES	STK	-	-	-	+
MANI B. M.	50/M	321097D	IWMI	YES	STK	-	-	+	+
PADMAVATHI	55/F	317099D	IW+RV+PW	YES	STK	+	+	-	-
DEVARAJ	70/M	478359A	AWMI	N0	-	-	-	+	-
KARUNAKARAN	66/M	316355D	ASMI	YES	STK	+	+	-	-
PAPPA	60/F	317836D	IW+RV	YES	STK	+	+	+	-
MANIRATHNAM	54/M	318085D	IW+RV+PW	YES	STK	-	-	-	+
STALIN	51/M	318111D	AWMI	YES	STK	+	+	-	-
KANNIYAPPA	67/M	318126D	AWMI	YES	STK	-	+	-	+
VEDAGIRI	28/M	303998D	AWMI	NO	-	+	-	+	-
MUNISWAMY	38/M	316557D	ASMI	YES	STK	-	-	-	+
VELU	41/M	318181D	IWMI	YES	STK	+	-	+	+
GUNABALAN	54/M	318172D	ASMI	YES	STK	-	+	-	-
MURUGESAN	52/M	318191D	AWMI	YES	STK	-	+	-	-
SUNDARMURTHY	72/M	641017C	AWMI	NO	-	-	+	+	-
VENKATPRASAD	41/M	321019D	IW+RV	YES	STK	-	-	-	-
PANEERSELVAM	34/M	319521D	AWMI	YES	STK	+	-	-	+
MUSFAQ AHMED	58/M	321076D	IW+RV+PW	NO	-	+	+	-	+
CHINNA THAMBI	60/M	320022D	ASMI	YES	STK	-	+	-	+
JAYA PALAN	58/M	321234D	AWMI	YES	STK	-	-	-	+
MURUGESAN	63/M	321280D	AWMI	YES	STK	-	+	+	-
SALAMMAL	80/F	305561D	AWMI	NO	-	+	-	-	-
RAVI	44/M	323502D	AWMI	YES	STK	+	-	-	-
RAMASWAMY	56/M	990112B	AWMI	YES	STK	-	-	-	+
ABDUL KHUDUS	45/M	322006D	ASMI	YES	STK	-	-	-	+
KADHAR	37/M	323720D	IW+RV+PW	YES	STK	+	+	-	+
CHINNADURAI	55/M	323737D	IW+RV	YES	STK	+	+	-	-
SOORAVEL	70/M	323733D	ASMI	YES	STK	+	+	-	+
A JYOTHI	59/M	323796D	ASMI	YES	STK	-	+	-	+
PUSHPA RANI	55/M	326005D	AWMI	YES	STK	+	+	-	-
SETHU BHASHA	40/M	326017D	AWMI	YES	STK	-	-	-	+
OCTOBER 2008									
NAME	A/S	H.NO	MI	LYSED	AGENT	DM	HTN	DYS	SMK
IBRAHIM	42/M	326208D	AWMI	NO	-	+	+	-	+
ARUNACHALAM	63/M	326222D	AWMI	YES	STK	-	+	-	-
RAMAMOORTHY	52/M	326225D	IWMI	YES	STK	-	-	+	-
ASOKAN	40/M	297755C	AWMI	YES	STK	-	+	-	+
MARGABANDHU	72/M	234331C	IWMI	YES	STK	+	-	-	-
AKBAR BASHA	50/M	326265D	AWMI	NO	-	+	-	+	+
LALITHA	53/F	957193B	IWMI	NO	-	-	+	-	-
MOHAN	49/M	326289D	AWMI	YES	STK	-	-	+	+
SUKUMAR	55/M	326120D	AW+IW+PW	YES	STK	-	-	-	+
JEYAKUMAR	38/M	326122D	IWMI	YES	STK	-	-	-	+
DOWLATHRAM	61/M	263863C	ASMI	YES	STK	+	+	-	+
MAHENDRAN	46/M	326144D	IWMI	YES	STK	-	-	-	+
VASADARAJ	60/M	327139D	AWMI	YES	STK	-	+	-	-
JAYA KUMAR	29/M	329521D	AWMI	YES	STK	-	+	-	+
PADMANABAN	74/M	329629D	AWMI	YES	STK	+	+	-	-
PAPPATHIAMMAL	65/F	329650D	AWMI	YES	STK	+	+	-	-
AMEER BASHA	46/M	709811C	IWMI	YES	STK	-	-	-	+
BASKAR	60/M	330681D	ASMI	YES	STK	+	+	-	-
SAHEB PEER	60/M	329718D	ASMI	NO	-	-	+	-	-
PREMNATH	54/M	329756D	AWMI	YES	STK	+	+	+	+
PARTHIBAN	45/M	106503D	IWMI	YES	STK	+	+	-	-
DEVI	38/F	329808D	AWMI	YES	STK	+	-	-	-
DEVARAJ	57/M	160793D	IW+RV+PW	YES	STK	-	-	+	+
AKBAR ALI	36/M	329829D	IWMI	NO	-	+	-	-	+
SELVAKUMAR	48/M	331633D	ASMI	NO	-	+	+	-	+
MUNISAMY	55/M	332477D	AWMI	YES	STK	-	-	-	+
SRINIVASAN	74/M	266122D	AWMI	YES	URO	-	+	-	+
NACHAMMAL	52/F	332762D	IWMI	NO	-	+	-	-	-
DHANAMMAL	80/F	332283D	AWMI	NO	-	-	-	+	-

AMEERTHAMMAL	60/F	329889D	ASMI	YES	STK	+	+	-	-
DASA RAJ	63/M	333964D	AWMI	YES	STK	-	+	+	-
DEVA RAJ	59/M	160793D	AWMI	YES	URO	+	+	-	-
PALANI	45/M	334424D	AWMI	YES	STK			+	+
DHANALAKSHMI	65/F	336597D	AWMI	NO	-	+	-	+	-
SADHASIVAM	34/M	336680D	IW+RV	YES	STK	-	+	-	+
KUPPUSWAMY	71/M	335613D	IWMI	YES	STK	+	+	-	+
HABIMUNNISA	55/F	335653D	AWMI	YES	STK	-	+	-	-
RANGAN	56/M	335660D	AW+IW	YES	STK	+	+	+	-
VENKAT REDDY	65/M	335657D	IWMI	NO	-	-	+	-	-
MOHAN	56/M	335710D	IW+RV	YES	STK	+	+	-	-
PARASMOL	40/M	335707D	IWMI	NO	-	+	+	+	+
GOVINDASWAMY	49/M	335738D	AWMI	YES	STK	+	-	+	-
KUPPAMAL	70/F	335772D	PW+LW	YES	STK	+	-	-	-
SANKARAN	72/M	339997D	IW+LW	YES	STK	+	+	+	+
MAGESWARI	47/F	340572D	AWMI	YES	STK	+	+	-	-
JOICE STELLA	38/F	340060D	ASMI	YES	STK	-	-	+	-
DAYALAN	57/M	332707C	HLMI	YES	STK	-	+	-	+
KRISHNAMOORTHY	70/M	340094D	AWMI	YES	STK	+	+	-	-
SURESH	29/M	340137D	AWMI	YES	STK	-	-	-	-
RAJU	48/M	340161D	ASMI	YES	STK	-	+	+	+
GULZAR AHMED	42/M	340164D	AWMI	YES	STK	+	+	-	+
MASILAMANI	62/M	343526D	AWMI	YES	STK	-	-	+	-
JAGADESHWARAISH	62/M	342736D	AWMI	YES	STK	+	-	+	-
SAMRAJ	67/M	343552D	AWMI	YES	STK	+	+	-	+
VENKASWAMY	88/M	343556D	IWMI	NO	-	-	+	+	-
RAJESWARI	52/F	343378D	IWMI	YES	STK	+	-	+	-
KARUNANIDHI	38/M	343622D	AWMI	YES	STK	-	-	+	+
RAJENDRAN	34/M	965973C	IW+RV	YES	STK	-	-	-	+
JANARDHANAN	53/M	343719D	IW+RV+PW	YES	STK	-	+	+	+
LOGANATHAN	46/M	343728D	AWMI	YES	STK	-	-	-	+
NOVEMBER 2008									
NAME	A/S	H.NO	MI	LYSED	AGENT	DM	HTN	Dys	SMK
PADMANABHAN	62/M	343782D	IW+RV	NO	-	+	+	-	-
SAROJA	55/F	347181D	AWMI	YES	STK	-	-	-	-
SELVA RAJ	56/M	960383C	IW+RV	YES	STK	+	+	-	+
KOTTILINGAM	62/M	347202D	IW+RV	YES	STK	-	+	-	+
RATHINAMMAL	73/F	347206D	IW+RV	NO	-	-	+	+	-
GUNDAL REDDY	58/M	347207D	AWMI	NO	-	+	+	-	-
SELVAGANESAN	69/M	347216D	IWMI	NO	-	+	-	-	+
ARUMUGAM	61/M	347276D	AWMI	YES	STK	+	--	-	+
PUSHPAMMAL	55/F	346753D	LWMI	YES	STK	-	-		-
VICTOR	59/M	346726D	IWMI	NO	-	+	+	+	+
BOOPALAN	60/M	349792D	ASMI	YES	STK	-	+	-	+
SIVARAJ	35/M	348754D	IWMI	NO	-	-	-	-	+
MARGABANDHU	60/M	025534D	AWMI	NO	-	-	-	-	+
DHANRAJ	54/M	346798D	IW+PW	YES	STK	+	+	-	-
CHARLS JEYAKUMAR	61/M	560390C	IW+RV	YES	STK	+	+	-	-
DEVAN	63/M	346793D	AWMI	YES	STK	-	+	-	+
SUNDHARAMOORTHY	70/M	346851D	AWMI	YES	STK	+	-	-	+
MURUGESAN	43/M	350107D	AWMI	YES	STK	+	-	-	+
SELVAM	40/M	350563D	AWMI	NO	-	+	-	-	+
HAJEE HAN	43/M	352003D	ASMI	NO	-	-	-	+	+
RAVI	40/M	352113D	ASMI	YES	STK	-	-	-	+
MURUGESAN	75/M	352131D	AWMI	NO	-	-	-	+	+
KUPPASWAMY	56/M	352098D	IW+RV	NO	-	+	+	-	-
JAYASANKAR	38/M	352145D	AWMI	NO	-	-	-	-	+
RAJA	28/M	352511D	AWMI	YES	STK	-	-	-	-
BALAKRISHNAN	49/M	352738D	AWMI	YES	STK	-	-	-	+
JANSKRISNAN	64/M	353577D	IW+RV+PW	YES	STK	-	-	-	-
RAJA SELVA	34/M	352155D	ASMI	YES	STK	-	-	-	+
RAJA	53/M	353609D	IWMI	NO	-	-	-	+	+
PURUSOTHAMAM	55/M	352179D	IW+PW	YES	STK	-	-	+	-
PUSHPA RANI	60/F	326005D	AWMI	YES	STK	-	+	-	-
JAGAN RAJAK	57/M	337169D	IW+PW	NO	-	+	-	+	-

NATESAN	85/M	355212D	IW+RV	YES	STK	+	-	-	-
KANNIYAPPAN	56/M	355238D	IW+RV+PW	YES	STK	-	+	+	-
SOUNDAR RAJAN	55/M	355248D	IW+RV	YES	STK	+	+	+	-
RAMANA	55/M	357664D	IW+RV	YES	STK	-	-	-	+
JAYARAMAN	70/M	359059D	AWMI	YES	STK	+	+	-	+
JANAKIRAMAN	58/M	358237D	AWMI	YES	STK	-	-	-	-
SHYMOL ROY	54/M	204728D	IWMI	YES	STK	-	+	+	+
JAYARAMAN	55/M	359087D	IW+LW+PW	YES	STK	-	-	-	+
SHANMUGAM	54/M	359105D	AWMI	NO	-	-	+	-	-
SHEK KASIM	58/M	757069B	AWMI	YES	STK	-	+	+	-
RAMACHANDRAN	81/M	359101D	LW+PW	NO	-	-	-	+	+
AMEER JAN	50/M	359164D	AWMI	NO	-	+	-	-	+
THOMAS GANAEKARAN	49/M	359097D	ASMI	NO	-	+	+	+	-
GOPAL	70/M	359187D	LW+PWMI	YES	STK	+	+	-	-
NAVANEETHAM	60/F	361165D	IW+RV+PW	YES	STK	+	-	+	-
PAVALAMMAL	65/F	363033D	IW+RV+PW	YES	STK	+	+	-	_
RANGAN	56/M	363038D	ASMI	YES	STK	+	-	-	+
MICHEL	53/M	363051D	AWMI	YES	STK	+	+	-	-
KUMAR K	46/M	363057D	IW+RV	YES	STK	-	-	+	-
PANGAJAN	65/M	360300D	IW+RV	YES	STK	+	-	-	-
SHANMUGAM	46/M	360741D	LWMI	NO		-	-	+	+
RAFI	37/M	971053C	PW+RV	YES	STK	-	+	+	-
RAMACHANDRAN	72/M	189961B	ASMI	YES	STK	+	+	-	+
MUNISAMY	57/M	363782D	IW+PW	YES	STK	-	+	+	+
THANGAVELU	70/M	363077D	IW+RV	YES	STK	-	+	+	+
SEKAR	59/M	189826D	IW+RV+PW	YES	STK	-	-	+	+

DECEMBER 2008

NAME	A/S	H.NO	MI	LYSED	AGENT	DM	HTN	Dys	SMK
PALANI	56/M	368048D	IW+RV+PW	YES	STK	-	-	-	+
MOHAN	55/M	893280C	IW+RV	YES	STK	+	+	+	-
KRISHNAN	75/M	363174D	AWMI	YES	STK	+	+	-	-
RAMAMURTHY	58/M	363194D	IW+RV+PW	YES	STK	+	+	-	+
RAVI	40/M	365088D	HLMI	YES	STK	+	+	-	-
KUPPUSWAMY	75/M	753392C	ASMI	YES	STK	-	-	-	+
JAYALAKSHMIAMMAL	71/F	365145D	AWMI	YES	STK	+	-	+	-
VALLIAMMAL	65/F	365157D	AWMI	YES	STK	+	+	-	-
THIYAGARAJAN	52/M	630456C	AWMI	YES	STK	+	+	-	-
BOOPALAN	59/M	365162D	ASMI	YES	STK	-	+	-	+
DAMODARAN	59/M	367109D	AWMI	YES	STK	+	+		+
ILYAS AHMED	52/M	365609D	AWMI	YES	STK	-	-	+	+
KANAGASABHA	57/M	368064D	AWMI	YES	STK	-	-	+	+
DHAMOTHARAN	71/M	368067D	IWMI	YES	STK	+	-	+	+
MALAR	36/M	368061D	AWMI	NO		-	-	+	-
SYED SALAUDDIN	56/M	367747D	AWMI	YES	STK	-	-	-	+
DURAI RAJ	58/M	367837D	AWMI	YES	STK	+	+	-	-
KRISHNAMOORTHY	65/M	363136D	IW+RV+PW	YES	STK	+	+	-	+
SYED NOOR S	70/M	368165D	AWMI	YES	STK	+	+	-	+
GOVINDAN	53/M	368214D	ASMI	YES	STK	+	+	-	-
SANTHOSAM	65/M	368212D	ASMI	NO		-	+	-	+
MOORTHY	54/M	368218D	IWMI	YES	STK	+	+	+	-
AYUB ALI KHAN	46/M	368238D	IWMI	NO		+	-	-	+
PONNUSWAMY	61/M	368265D	AWMI	YES	STK	-	-	+	+
ETHIRAJN	63/M	370826D	ASMI	YES	STK	-	-	-	-
LAKSHMANAN	52/M	248898C	IW+RV+PW	YES	STK	+	-	-	-
KANTHAMMAL	60/F	371072D	LW+PW	YES	STK	+	-	-	-
KARUNAKARAN	50/M	371071D	AWMI	YES	STK	-	+	-	-
ALIMA BEE	70/F	371091D	IWMI	YES	STK	+	+	-	-
DURAI SAMY	70/M	371122D	AWMI	YES	STK	-	-	-	+
SIVALINGA ACHARI	57/M	371128D	ASMI	NO	-	-	+	+	-
SAMU	58/M	372533D	AWMI	YES	STK	-	-	+	+
BALAMURUGAN	35/M	372524D	IW+RV+PW	YES	STK	+	+	-	+
GOVINDAMMAL	70/F	370956D	AWMI	NO	-	-	-	+	-
VEDI	55/M	372620D	AWMI	YES	STK	+	+	-	-
KANAGAMMAL	70/F	372627D	AWMI	YES	STK	+	+	+	-
RAGURAMAN	30/M	372647D	IWMI	YES	STK	-	+	+	+

SRINIVASAN	45/M	258630D	IWMI	YES	STK	-	+	-	+
MADHUSUDAN	60/M	364900D	AWMI	YES	STK	-	+	-	+
NANDAN	49/M	372738D	IW+RV	NO	-	-	-	-	+
NARASIMALU	62/M	372747D	IW+RV+PW	YES	STK	+	+	+	-
SHANMUGAM	73/M	844769B	AWMI	YES	STK	+	+	-	-
DURAI RAJAN	48/M	485124C	IWMI	NO	-	+	+	-	-
CHANDRASEKARAN	44/M	375073D	IW+RV	YES	STK	-	+	+	-
ANANDA	52/M	375090D	AWMI	YES	STK	+	+	+	+
SAORI AMMAL	75/F	376438D	IW+PW	NO	-	+	+	-	-
MAQBOOLAHMED	56/M	375150D	HLWMI	YES	STK	+	+	+	+
GOVINDRAJ	61/M	375168D	AWMI	YES	STK	+	-	-	+
MUTHU	57/M	377064D	IW+LW+PW	YES	STK	-	-	+	+
DEVAKI	40/F	377075D	AWMI	NO	-	+	+	-	-
VILVANATHAN	76/M	377104D	IW+RV+PW	YES	STK	-	-	-	+
RAMALINGAM	67/M	548639A	IWMI	NO	-	+	-	-	+
DAYALAN	32/M	377114D	AWMI	YES	STK	-	-	+	-
SAROJA	53/F	376987D	IW+ RV+PW	YES	STK	+	-	-	-
KAMALAMMAL	55/F	377718D	AWMI	NO	-	+	+	+	-
SATHYANATHAN	59/M	378342D	IW+PW	YES	STK	-	+	+	+
ELANGOVAN	70/M	378599D	IW+PW+RV	YES	STK	-	-	-	-
KANNAN	63/M	378782D	ASMI	YES	STK			+	+
PANDIAN	51/M	380092D	ASMI	YES	STK	+	+	+	-
ANANDARAJ	55/M	378793D	IW+RV	YES	STK	+	+	+	+
GANDHI	51/M	264557B	HLMI	YES	STK	-	-	-	+
ANNAMALAI	50/M	117119B	AWMI	YES	STK	+	-	+	+
RAGU	45/M	378673D	IW+RV	YES	STK	-	+	-	+
JAN 2009									
NAME	A/S	H.NO	MI	LYSED	AGENT	DM	HTN	-	SMOK
Rukmani	45/F	382590D	IW+PW	YES	STK	+	+	+	-
Krishnan	64/M	382622D	IW+RV	YES	STK	_	_	-	+
Kesavareddy	59/M	382636D	AWMI	YES	STK	+	+	-	+
Abdulrehman	68/M	382735D	AWMI	YES	STK	+	+	-	-
Vasantha	66/f	910513D	IW+RV	TES	STK	+	+	-	-
Indrani	55/F	217092B	AWMI	YES	STK	+	-	+	-
Santhaban	51/M	382795D	AWMI	YES	STK	+	-	-	+
Gobindraj	75/m	385407D	IW+RV	YES	STK	-	+	-	-
Gnanambal	64/F	378591D	AWMI	YES	STK	+	-	-	-
Maqbool	67/M	385435D	AWMI	YES	STK	+	+	+	-
Arumugam	57/m	537133b	AWMI	YES	STK	-	-	+	+
Murgesan	59/M	802859B	AWMI	YES	STK	+	+	+	-
Ramaswami	71/M	386883D	AWMI	YES	STK	+	+	+	+
Murugesan	85/m	387082D	IW+RV	YES	STK	+	-	-	+
Mohan velu	62/m	016388D	RV+IW	YES	STK	+	+	-	+
Durai s	55/m	387123D	AWMI	YES	STK	+	+	-	-
Ambuja	35/F	387141D	IW+RV	YES	STK	+	-	+	-
Denan g	60/m	623533C	AWMI	TES	STK	+	+	+	-
Milton a	38/M	387217D	IW+RV	YES	STK	-	-	+	-
CHRISTOPHER	48/M	387247D	ASWMI	YES	STK	-	-	-	-
NARESH	52/M	390098D	AWMI	YES	STK	+	+	+	-
AMMAIMMAL	65/F	390113D	IW+RV+PW	YES	STK	+	+	-	-
VELLAI	65/M	392129D	AWMI	YES	STK	+	-	+	+
MURUGAN	33/M	391205D	AWMI	YES	STK	-	-	-	+
FAKIR	42/M	392596D	ASWMI	YES	STK	-	-	-	+
MOHANAMMLA	56/F	392465D	IW+PW	YES	STK	+	+	+	-
JAYALAKSHMI	78/F	392279D	IW+RV	YES	STK	-	-	+	-
KAMRAJ	43/M	265938D	AWMI	YES	STK	-	-	-	-
ROJA BAI	65/F	392293D	AWMI	YES	STK	+	+	-	-
KANNAN	68/M	393544D	IW+RV	YES	STK	+	-	+	-
BALU	27/M	395022D	AWMI	YES	STK	+	-	+	+
TULASINATHAN	46/M	395039D	IW+RV+PW	YES	STK	-	-	-	-
SIVANANDAN	68/M	512318C	ASWMI	YES	STK	-	-	+	-
PUSPAWATHI	70/F	395132D	AWMI	YES	STK	-	-	-	-
MUNNI SAMY	71/M	395146D	IWMI	YES	STK	+	+	+	+
MOHANAMMAL	56/F	392465D	IW+RV+PW	YES	STK	+	+	+	-
JAGADAMBAL	62/F	395290D	IW+RV	YES	STK	-	+	-	-

GANESAN	71/M	156014C	AWMI	YES	STK			-	
THANGO	55/M	331515D	AWMI	YES	STK	-	-	-	-
GOPALSWAMI	60/M	698896D	IW+PW+RV	YES	STK	+	+	+	+
JAYALAKSHMI	56/F	398929D	IWMI	YES	STK	-	-	-	-
VASUGIL	64/F		AWMI	NO	-	-	-	-	-
MUNISWAMY	71/M		IW+RV	NO	-	+	+	+	+
SRINIVASAN	55/M		AWMI	NO	-	+	+	+	+
MAHABABUNISHA	70/F		ASMI	NO	-	+	+	-	+
AMEER BEE	60/F		AWMI	NO	-	-	-	+	-
ELANGOVAN	33/M		AWMI	NO	-	+	+	-	+
IRUDAYANATHAN	63/M	382601D	IW+RV+PW	YES	TNK	-	-	+	+
SIVANANDAM	67/M	512318C	AWMI	YES	TNK	+	-	-	-
GOUSE BASHA	48/M	387075D	IW+RV	YES	TNK	-	-	-	+
ATHIMUULAM	60/M	392267D	IW+RV	YES	TNK	-	+	-	+
SRINIVASAN	75/M	266122D	AWMI	YES	TNK	+	-	+	+
KANNAYIRAM	62/M	395072D	IW+PW+RV	YES	TNK	+	+	-	+
ASMATHUNISA	69/F		IW+PW+RV	YES	TNK	+	+	+	-
FEB 2009								+	
NAME	A/S	H.N	MI	LYSED	AGENT	DM	HTN	-	SMOK
MANIAMMAL	51/F	400121D	AWMI	YES	STK	+	-	+	-
DURAI	70/M	399143D	IWMI	YES	STK	+	+	+	+
KANNAN M	67/M	400244D	AWMI	YES	STK	+	-	+	+
GOPALAN	64/M	040628D	IW+RV	YES	STK	+	-	-	_
MUNIRAGULU	62/M	400275D	IW+RV	YES	STK	+	+	+	+
JOTHI G	63/M	367566B	IW+RV	YES	STK	+	-	-	-
JEEVA	80/M	401936D	IW+RV	YES	STK	+	+	-	+
SUBRAMANI	74/M	400413D	AWMI	YES	STK	+	+	+	-
DORAIRAJ	67/M	208594D	AWMI	YES	STK	+	+	-	+
OMPRAKESH	45/M	408078D	AWMI	YES	STK	+	+	-	-
NEOPOLIAN	41/M	410007D	AWMI	YES	STK	-	-	-	+
PANJAMMAL	57/F	408999D	IWMI	YES	STK	-	+	-	
DURAISAMY	65/M	402980D	IW+PW+RV	YES	STK	-	+	+	+
VINAYAGAM	48/M	411280D	AWMI	YES	STK	+	+	-	-
PADAVATTAN	60/M	412021D	IW+PW+RV	YES	STK	-	-	-	+
SIMON	40/M	862094C	IW+PW+RV	YES	STK	-	+	-	-
ROSUL	61/M	412043D	IW+PW+RV	YES	STK	-	-		-
SUBRAMANI	47/M	412117D	AWMI	YES	STK	-	-	+	-
NEELA	52/M	413114D	AWMI	YES	STK	-	+	+	-
LAKMI	66/M	412170D	IW+RV	YES	STK	+	+	+	-
MALARKADAI	50/F	412227D	IW+PW	YES	STK	+	-	+	-
RAVI KUMAR	44/M	354960B	LW	YES	STK	+	+	+	-
DEVARAM	35/M	415041D	AWMI	YES	STK	+	+	+	-
KRISHNAMOORTY	80/M	227759C	AWMI	NO	-	+	+	-	-
PARKODI	55/M	403190D	AWMI	NO	-	+	-	-	+
POGATHAN	55/M	400465D	AWMI	NO	-	+	+	-	-
ABBOGASAN	60/M	404935D	IW+RV	NO	-	+	+	-	-
CHINNAGREYAN	70/M	408038D	IWMI	NO	-	+	+	+	-
PAPPAMAL	78/M	998969B	ASMI	N0	-	+	+	-	-
KANNAN	47/M	412058D	AWMI	NO	-	+	-	+	+
MD IQBAL	64/M	412128D	ASMI	NO	-	-	-	-	-
KARNAKARAN	54/M	412149D	ASMI	NO	-	-	+	-	-
RATHABAI	65/M	412206D	IWMI	NO	-	-	+	-	+
NAGARANI	50/F	415259D	AWMI	NO	-	+	+	-	-
RIYAZ AHMED	40/M	415892D	AWMI	NO	-	-	-	-	+
SUBBURAJ	56/M	400111D	IW+RV	YES	TNK	-	+	-	-
JAYARAJAYAN	60/M	400192	AWMI	YES	TNK	+	-	+	+
ANJANEYOLIN	52/M	417705D	LWMI	YES	TNK	+	+	+	-
GANANA	71/M	400214D	IW+PW+RV	YES	TNK	+	-	-	-
PADMAVATHI	83/M	400239D	AWMI	YES	TNK	-	-	+	-
JAGADAMAN	69/M	266040D	AWMI	YES	TNK	+	+	-	-
SARASWATHI	51/F	406697D	AWMI	YES	TNK	-	-	+	-
SANTHAM	56/M	157324D	AWMI	YES	TNK	+	-	+	+
SANTHA	62/F	408073D	AWMI	YES	TNK	+	+	-	-
NATARAJAN	61/M	408155D	AWMI	YES	TNK	+	-	-	-
GAJCHAKSHAM	68/F	415014D	AWMI	YES	TNK	-	+	-	-

DAMODARAN	60/M	367109D	AWMI	YES	STK	+	-	+	+
KUPPARI	50/M	415091D	AWMI	YES	STK	+	+	-	-
SABIR	50/M	417629D	AWMI	YES	STK	+	+	-	-
PURSOTTAMAM	58/M	417646D	AWMI	YES	STK	+	+	+	-
KASPUNISHA	50/F	417671D	IW+RV+PW	YES	STK	+	-	+	-
KRISHANAN	67/M	745703C	IW+RV+PW	YES	STK	+	+	-	+
MANOHARI	55/F	417772D	IW+RV+PW	YES	STK	+	+	+	-
MARCH 2009									
NAME	A/S	H.N.	MI	LYSED	AGENT	DM	HTN	DYS	SMK
SELVA	47/M	186293D	IW+RV+PW	YES	STK	+	+	-	+
KALYANI	75/F	417377D	AWMI	YES	STK	+	+	+	-
LEEMAMMAL	60/F	418899D	AWMI	YES	STK	+	-	-	-
JABARANI	54/F	419098D	ASMI	YES	STK	-	-	-	-
ARUMUGAM	55/M	419162D	AWMI	YES	STK	-	+	-	-
SUBRAMANIUM	47/M	420669D	ASMI	YES	STK	-	+	+	+
ISMAIL	52/M	420809D	ASMI	YES	STK	+	+	-	-
RAJENDRAN	47/M	420897D	AWMI	YES	STK	-	-	+	-
RAJENDRAN	42/M	402850D	AWMI	YES	STK	-	+	+	-
KHALEELUR	54/M	422535D	IW+PW	YES	STK	-	+	-	-
DEIRVU	78/M	422167D	PW+RV	YES	STK	-	+	+	+
GANGADHARAN	56/M	422193D	IW+PW	YES	STK	-	+	+	-
RAMAMURTHY	47/M	423256D	AWMI	YES	STK	+	-	+	-
VENKATESAN	64/M	423308D	AWMI	YES	STK	+	-	-	+
DAMODARAN	68/M	423817D	AWMI	YES	STK	+	+	+	+
GOVIND RAJ	59/M	424115D	IW+RV	YES	STK	+	+	-	+
KRISHNASWAMY	80/M	424185D	AWMI	YES	STK	+	+	-	-
JOSEPH	48/M	423372D	IWMI	YES	STK	+	-	+	-
DEVARAJ	48/M	425404D	IW+PW	YES	STK	+	+	-	-
KHALEED	55/M	426171D	ASMI	YES	STK	+	+	-	-
SUBRAMANI	59/M	429004D	AWMI	YES	STK	+	+	-	-
LAKSHMI	50/F	475812C	IWMI	YES	STK	+	+	-	-
SARASWATI	58/F	429034D	AWMI	YES	STK	+	-	+	-
VENKATACHALAM	60/M	428007D	AWMI	YES	STK	-	-	-	+
ELUMALI	62/M	407126D	AWMI	YES	STK	-	+	-	+-
SRINIVASAN	61/M	431591D	IW+RV	YES	STK	-	+	-	-
KAMALNATHAN	44/M	432352D	AWMI	YES	STK	+	+		+
SELVAM	65/M	432035D	IW+PW+LW	YES	STK	-	-	+	+
SELVA RAJAN	59/M	432070D	IW+ASMI	YES	STK	-	+	-	-
MURALI	51/M	322655D	AWMI	YES	STK	+	+	-	-
SAMUEL	50/M	432122D	AWMI	YES	STK	+	+	-	+
SELVAM	37/M	432124D	IW+RV+PW	YES	STK	+	+	-	-
KUMAR	44/M	432146D	PW+LW	YES	STK	-	-	-	-
DAMODARAN	45/M	295455D	ASMI	YES	STK	+	-	-	-
NAGARAJAN	55/M	432185D	IW+AWMI	YES	STK	-	+	-	-
JIBASING	41/M	432188D	IWMI	YES	STK	+	+	-	+
LAKSHMI	65/M	432217	ASMI	YES	STK	+	+	-	-
RAMESH	40/M	434934D	AWMI	YES	STK	+	-	+	-
VELAGUDAN	61/M	415175D	ASMI	YES	STK	-	+	-	+
JAGANNATHAN	36/M	432233D	AWMI	YES	STK	+	+	+	+
SANTHANAM	51/M	382795D	AWMI	NO	-	+	+	-	+
PALANISWAMY	48/M	417652D	AWMI	NO	-	+	+	-	-
RANI	56/F	207496D	AWMI	NO	-	+	-	-	-
MUNIRAGULU	70/M	419001D	IWMI	NO	-	+	-	-	-
MURUGESAN	60/M	419018D	IWMI	NO	-	+	+	-	-
JEBARANI	54/F	419098D	AWMI	NO	-	+	+	-	-
ABDUL HAJ	68/M	702476C	AWMI	NO	-	+	+	+	-
SATHYAMOORTHY	58/M	423473D	IWMI	NO	-	+	-	+	-
AKBER ALI	70/M	426160D	IWMI	NO	-	+	+	-	+
PALANI	66/M	998658B	AWMI	NO	-	-	+	+	+-
PARASURAMAN	65/M	428071D	AWMI	NO	-	-	+	-	-
KARUNAKARAN	40/M	394052D	AWMI	NO	-	-	+	+	+
CHANDAN	64/M	429207D	IW+RV+PW	YES	TNK	+	-	+	+
APR 2009								-	-
LAKSHMI	51/F	435867d	IW+RV	YES	STK	+	+	-	-

RAMAMOORTHY	67/M	436093D	AWMI	YES	STK	+	+	-	+
KESAVEL	65/M	436106D	AWMI	YRS	STK	+	+	+	-
LAKSHMI	65/F	432217D	AWMI	YES	STK	+	-	-	-
RAGUNATHAN	46/M	439158D	ALWMI	YES	STK	-	+	-	+
SAYED NASEER	46/M	439184D	AWMI	YES	STK	-	_	-	-
SAMPATH	44/M	439173D	HLMI	YES	STK	-	+	-	-
NATARAJAN	63/M	818602B	AWMI	YES	STK	-	-	-	+
ILLIAC	42/M	757968C	AWMI	YES	STK	+	+	+	-
ELUMALAI	48/M	441085D	AWMI	YES	STK	+	+	+	-
MANOHARAN	52/M	441072D	IW+RV+PW	YES	STK	+	+	+	-
SREENIVASAN	36/M	441124D	AWMI	YES	STK	+	+	+	-
RAVI	45/M	441121D	ASWMI	YES	STK	-	+	-	+
ABUNI	61/M	441140D	ASWMI	YES	STK	-	-	+	-
ILAMPARWATHI	49/M	067342D	IW+RV	YES	STK	-	-	+	-
MUNNIAMMAL	60/F	443060D	IWMI	YES	STK	+	-	+	-
SUNDARAJAN	49/M	013170A	ASWMI	YES	STK	+	-	-	-
KUMARESAN	51/M	443811D	AWMI	YES	STK	-	-	+	+
SATNEYA	47/M	444065D	AWMI	YES	STK	-	-	+	-
SOWKATH ALI	39/M	444068D	IW+RV	YES	STK	-	-	-	+
MUNGESAN	65/M	444087D	ASWMI	YES	STK	+	+-	-	+
MOHAN	51/M	445747D	ASWMI	YES	STK	+	+	+	-
SRINIWASAN	40/M	446333D	IWMI	YES	STK	-	+	+	-
DHAKSHINA	56/M	446373D	AW+IW	YES	STK	+	+	+	-
ARUMUGAM	49/M	446891D	IW+RV+PW	YES	STK	+	+	+	+
SHANMUGAM	50/M	447770D	AWMI	YES	STK	+	+	-	+
JAYARAMAN	75/M	447920D	AWMI	YES	STK	-	+	-	-
PACHIAPPAN	76/M	449013D	HLMI	YES	STK	+	+	-	+
NAVNEETHAMAL	65/F	449041D	AWMI	YES	STK	+	-	+	-
ARJEL	55/M	449069D	IW+RV	YES	STK	-	-	+	+
SHANTHA	55/M	449179D	IW+RV+LM	YES	STK	-	+	+	-
KAMLA BAI	69/F	450648D	AWMI	YES	STK	-	+	-	-
KRISHNAMURTHY	54/M	449272D	IW+RV	YES	STK	-	_	-	-
KASTHURIAMMAL	65/F	452334D	AWMI	YES	STK	-	+	-	-
JAGADAMBAL	62/M	395290D	AWMI	YES	STK	-	-	-	+
MAWEAPPAN	67/M	432034D	AWMI	NO	-	+	+	+	-
VENKATESAN	33/M	432064D	ASMI	NO	-	+	+	+	-
NIYAZ	42/M	129225B	IW+RV+LW	NO	-	+	+	+	-
GUNASEKARAN	40/M	008203D	HLMI	NO	-	+	+	+	-
VENU	60/M	446332D	ASMI	NO	-	-	+	-	+
JAYARAMAN	40/M	446334D	AW+IW	NO	-	-	-	+	-
RATHAKONKAN	86/M	447164D	IW+RV+PW	NO	-	-	-	+	-
BALU K.	47/M	446405D	AWMI	NO	-	+	-	+	-
PERUMAL	55/M	449025D	IW+RV+PW	NO	-	+	-	-	-
ABDUL JABBAR	60/M	449053D	IWMI	NO	-	-	-	+	+
SENTHIL	30/M	450087D	AWMI	NO	-	-	-	+	-
SANKARAN	63/M	014313C	IW+RV	YES	TNK	-	-	-	+
LAKSHMI	65/F	432217D	AWMI	YES	TNK	+	+-	-	+
SADAWANTHAM	48/M	932104C	IWMI	YES	TNK	+	+	+	-
JAGADAMBAL	62/F	395290D	AWMI	YES	TNK	-	+	+	-
MAY 2009									
NANE	A/S	HN	MI	LYSED	AGENT	DM	HTN	DYS	SMK
MANOHARAN	50/M	452543D	AWMI	YES	STK	+	+	-	+
LAKSHMI	45/F	452607D	IWMI	YES	STK	-	+	-	-
LAKSHMANAN	62/M	452438D	IWMI	YES	STK	+	+	-	+
PONNURANGAM	65/M	452675D	IWMI	YES	STK	+	-	+	+
KALAI	52/M	454555D	IWMI	YES	STK	-	-	+	+
ADULSALOAN	80/M	454609D	AWMI	YES	STK	-	+	+	-
JAGAVEL	59/M	449137D	AWMI	YES	STK	-	+	-	+
LATITHAMMAL	54/M	454755D	IW+RV=PW	YES	STK	-	_	-	-
VALLIMABEL	65/F	454759D	AWMI	YES	STK	-	+	-	-
SAMPOORNAMMA	65/M	390880C	IWMI	YES	STK	-	-	-	+
JOHN SELVARAJ	37/M	457031D	IW+RV+PW	YES	STK	+	+	+	-
BALAJI	36/M	318291B	ASMI	YES	STK	+	+	+	-
NEELA KUNDAN	58/M	460016D	ASMI	YES	STK	+	+	+	-
VELAYA KUMAR	53/M	460016D	AWMI	YES	STK	+	+	+	-
SRINIVASAN	44/M	460026D	LWMI	YES	STK	-	+	-	+

ANNAWAMY	71/M	460050D	IWMI	YES	STK	-	-	+	-
MURUGAN	60/M	440056D	IW+RV	YES	STK	-	+	-	+
JYOTHI	59/F	590601B	ASMI	YES	STK	-	_	-	-
SHANKARAN	72/M	460193D	AWMI	YES	STK	-	+	-	-
VELUMANI	60/F	48152D	IW+RV	YES	STK	-	-	-	-
HALUMABEE	65/F	988061C	IW+RV	YES	STK	+	+	+	-
MARGABAVELLU	70/M	461729D	ASMI	YES	STK	+	+	+	-
SARASWATHI	52/F	454623D	AWMI	YES	STK	+	+	+	-
SADIQ	38/M	463382D	IWMI	YES	STK	+	+	+	-
KRISHNAN	60/M	463478D	AWMI	YES	STK	-	+	-	+
MUNIATHAN	60/M	464554D	AWMI	YES	STK	-	-	+	-
MOHANAN	58/M	465583D	ASMI	YES	STK	-	-	+	-
MUNNISWAMY	70/M	475580D	IW+LW+PW	YES	STK	+	-	+	-
RADHAKRISHNAN	58/M	465650D	ASMI	YES	STK	+	-	-	-
AMEENA	49/F	467842D	AWMI	YES	STK	-	-	+	-
KAMRAJ	40/M	469538D	IW+RV	YES	STK	-	-	+	-
DAYALAN	50/M	469566D	AWMI	YES	STK	-	-	-	+
NITHYANANDAN	42/M	469574D	AWMI	YES	STK	+	+-	-	+
MURALIKRISNAN	49/M	469680D	AWMI	YES	STK	+	+	+	-
RAJI	37/M	469055D	IW+RV	YES	STK	-	+	+	-
RAJENDRA BABU	50/M	453245D	ASMI	NO	-	+	+	+	-
ABDUL BASHA	50/M	454595D	IW+RV	NO	-	+	+	+	+
BAKHTAVACHALAN	59/M	457047D	IW+LW+PW	NO	-	+	+	-	+
VIMLA	65/F	458026D	ASMI	NO	-	-	+	-	-
PRITHUBI	60/M	460012D	IWMI	NO	-	+	+	-	+
ARUMUGAM	60/M	460072D	AWMI	NO	-	+	-	+	+
JAYALAKSHMI	80/F	461542D	AWMI	NO	-	-	-	+	-
AZOORA BEGUM	60/F	427537C	AWMI	NO	-	-	+	+	-
AMEENA	49/F	467842D	AWMI	NO	-	-	+	-	-
RAMAMOORTHY	68/M	469614D	AWMI	NO	-	-	_	-	-
MAHADEVAN	55/M	460005D	IW+RV+PW	YES	TNK	-	+	-	-

JUNE 2009

NAME	A/S	H.N	MI	LYSED	AGENT	DM	HTN	DYS	SMK
CHINNAKULANTHI	75/F	469551D	AWMI	YES	STK	+	+	+	-
BARANI	51/M	277187C	IW+RV	YES	STK	+	+	+	-
ALLABAGESH	60/M	352026D	AWMI	YES	STK	+	+	+	-
ARUMUGAM	65/M	472172D	ASMI	YES	STK	-	+	-	+
RAJAMMA	60/F	120207C	AWMI	YES	STK	-	-	+	-
VENKATESAN	55/M	470918D	AWMI	YES	STK	-	-	+	-
PADMAWATHI	68/F	476703D	ASMI	YES	STK	+	-	+	-
SAMPATH RAJ	50/M	478548D	IW+PW	YES	STK	+	-	-	-
DAKSHNAMURTHY	61/M	397446D	ASMI	YES	STK	-	-	+	+
CHOKAMMAL	76/F	480209D	IW+PW	YES	STK	-	-	+	-
KAMAL BASHA	57/M	480214D	IWMI	YES	STK	-	-	-	+
KHADEER AHMAD	45/M	480223D	AWMI	YES	STK	+	+-	-	+
JAYARAMAN	56/M	980256D	IWMI	YES	STK	+	+	+	-
DUKSHAN	36/M	480287D	IWMI	YES	STK	-	+	+	-
ESACK	40/M	480428D	AWMI	YES	STK	+	+	+	-
RAVICHANDRAN	48/M	480495D	AWMI	YES	STK	+	+	+	+
SHANMUGAM	70/M	480306D	IWMI	YES	STK	+	+	-	+
VEERSWAMY	50/M	480316D	IW+RV	YES	STK	-	+	-	-
VENUGOPAL	65/M	480312D	IWMI	YES	STK	+	+	-	+
SONU	50/F	480352D	AWMI	YES	STK	+	-	+	-
SAGADERAN	65/M	482884D	AWMI	YES	STK	-	-	+	+
IQBAL	26/M	483704D	AWMI	YES	STK	-	+	+	-
RAVISHANKER	50/M	480312D	IWMI	YES	STK	-	+	-	+
MUTHUKRISHNAN	65/M	483114D	AWMI	YES	STK	-	_	-	-
VIJAYAN	40/M	484142D	AWMI	YES	STK	-	+	-	-
SARASWATHY	65/F	484185D	AWMI	YES	STK	-	-	-	-
JEEVA	50/F	484259D	AWMI	YES	STK	+	+	+	-
SALIMA	55/F	486624D	IW+RV	YES	STK	+	+	+	-
DESAB REDDY	65/M	486660D	IWMI	YES	STK	+	+	+	-
NARAYAN SWAMY	75/M	608766D	IW+RV	YES	STK	+	+	+	-
GOVINDSWAMY	65/M	490126D	IW+RV	YES	STK	-	+	-	+
LAKSHMI	58/F	490197D	IW+RV	YES	STK	-	-	+	-
RASOO LKHAN	50/M	053465B	AWMI	YES	STK	-	+	-	+

JOTHISEKHAR	37/M	882437C	AWMI	YES	STK	-	_	-	-
CHOKAAMMAL	78/F	480209D	IWMI	NO	-	-	+	-	-
GEETHA LAKSHMI	55/F	312919D	AWMI	NO	-	-	-	-	-
MALIYA	55/F	312942D	AWMI	NO	-	+	+	+	-
SEIKHHERDEU	85/M	486633D	IW+RV+PW	NO	-	+	+	+	-
KANTHA	58/F	486163D	AWMI	NO	-	+	+	+	-
VELU M	72/M	480295D	IW+RV+PW	YES	TNK	+	+	+	-
MANOHARAN	53/M	441072D	AWMI	YES	TNK	-	+	-	+
JAYARAMAN	70/M	700917B	IW+PW+RV	YES	TNK	-	-	+	-
JULY 2009									
NAME	A/S	H.N	MI	LYSED	AGENT	DM	HTN	DYS	SMK
ZUBEDHA BEGUM	73/F	490283D	AWMI	YES	STK	-	-	+	-
LAKSHMI	50/F	493289D	AWMI	YES	STK	-	-	+	-
MASILAMANI	52/M	493028D	AWMI	YES	STK	-	-	-	+
SUSHILA	62/F	493089D	AWMI	YES	STK	+	+-	-	-
ABDUL AZEEZ	40/M	497965D	AWMI	YES	STK	+	+	+	-
DURAI RAJ	50/M	497971D	AWMI	YES	STK	-	+	+	-
GANESAN	50/M	497977D	AWMI	YES	STK	+	+	+	-
SUNDER RAJAN	48/M	500508D	AWMI	YES	STK	+	+	+	+
JAIYAMMAL	75/F	500570D	AWMI	YES	STK	+	+	-	-
ANBALAGAN	45/M	495245D	HLWMI	YES	STK	-	+	-	-
AMBU	36/M	493437D	IWMI	YES	STK	+	+	-	+
RAMALINGAM	65/M	493463D	AWMI	YES	STK	+	-	+	+
DAKSHNAMOORTHY	47/M	493531D	AWMI	YES	STK	-	-	+	+
SHANTI	47/M	493540D	IW+RV+PW	YES	STK	-	+	+	-
KUMAR	46/M	223247C	RV+IW	YES	STK	-	+	-	+
MD JABAL	59/M	500626D	AWMI	YES	STK	-	_	-	-
GUARDASWAMY	83/M	503570D	IWMI	YES	STK	-	+	-	-
SAEED BASHA	78/M	965742C	IW+PW+RV	YES	STK	-	-	-	+
JAYASEELAN	52/M	149481D	AWMI	YES	STK	+	+	+	-
SEEVAGAMI	65/F	508040D	AWMI	YES	STK	+	+	+	-
RANDURAH	68/M	508132D	IW+RV+PW	YES	STK	+	+	+	-
BABU	40/M	508171D	IW+RV	YES	STK	+	+	+	-
ZEHATHA BEGUM	52/F	508097D	IW+RV+PW	YES	STK	-	+	-	+
PREMA	62/F	8555125C	IW+RV	YES	STK	-	-	+	-
BALAKRISHNAN	60/M	511154D	ASMI	YES	STK	-	-	+	-
MUNIAMMAL	65/F	508376D	AWMI	YES	STK	+	-	+	-
LAKSHMI	50/F	493289D	AWMI	NO	-	+	-	-	-
PANDURANGAN	71/M	341630D	AWMI	NO	-	-	-	+	+
RAMACHANDRAN	58/M	120464B	IW+RV+PW	NO	-	-	-	+	-
INANYAIAMALAI	59/M	505557D	LWMI	NO	-	-	-	-	+
MURALINATHAN	42/M	505676D	AWMI	NO	-	+	+-	-	+
JAYCHAND	62/M	488168D	AWMI	YES	TNK	+	+	+	-
SAMBANDA MURTHY	59/M	493449D	AWMI	YES	TNK	-	+	+	-
GOBEL ANDREWS	47/M	501436D	AWMI	YES	TNK	+	+	+	-
PANDIAN	50/M	508303D	AWMI	YES	TNK	+	+	+	+
RAMDAS	60/M	514101D	AWMI	YES	TNK	+	+	-	+
AUGUST 2009									
NAME	A/S	H.N	MI	LYSED	AGENT	DM	HTN	DYS	SMK
BAIRANAN	42/M	514263D	IW+RV+PW	YES	STK	+	-	+	+
MANIK BASHA	79/M	514284D	AWMI	YES	STK	-	-	+	+
SAROJA	45/F	514294D	AWMI	YES	STK	-	+	+	-
VARDIAH	65/M	513695D	AWMI	YES	STK	-	+	-	+
SHANMUGANATHAN	28/M	508443D	AWMI	YES	STK	-	_	-	-
ELEANHARAN	50/M	508461D	IW+PW	YES	STK	-	+	-	-
MANI	45/M	517141D	IW+RV	YES	STK	-	-	-	+
KALM	30/M	518015D	AWMI	YES	STK	+	+	+	-
PANGULAE	70/M	518017D	AWMI	YES	STK	+	+	+	-
ANANDAN Y	53/M	518292D	ASMI	YES	STK	+	+	+	-
DAYAWATI	55/M	518557D	AWMI	YES	STK	+	+	+	-
SYEED FAROOK	49/M	518620D	AWMI	YES	STK	-	+	-	+

SHREN KUMAR	56/M	518632D	AWMI	YES	STK	-	-	+	-
SHANKAR	42/M	526113D	AWMI	YES	STK	-	+	-	+
SUDARSHAN	55/M	526737D	AWMI	YES	STK	-	_	-	-
JULEUS	59/M	289227C	AWMI	YES	STK	-	+	-	-
SENTHAMERI	59/F	526271D	AWMI	YES	STK	-	-	-	+
LOGAMMAL	75/F	526309D	AWMI	YES	STK	+	+	+	-
LAKSHMI DEVI	53/F	326345D	AWMI	YES	STK	+	+	+	-
NARAYANAN	55/M	526351D	IW+LW	YES	STK	+	+	+	-
BARUN KANTI	67/M	141053D	AWMI	YES	STK	+	+	+	-
ELAVA HAJU	45/M	530059D	IW+RV	YES	STK	-	+	-	+
SURYAKANTHA	71/F	530054d	IW+RV+PW	YES	STK	-	-	+	-
KRISHNAN	54/M	530063D	AWMI	YES	STK	-	-	+	-
CHANDIRAN	59/M	530174D	IW+RV	YES	STK	+	-	+	-
KANDASWAMY	47/M	530321D	AWMI	YES	STK	+	-	-	-
NARGARAJA	68/M	514429D	AWMI	NO	-	-	-	+	+
KALYANAMMA	75/F	518006D	IW+RV	NO	-	-	-	+	-
GOVINDASWAMY	70/M	518637D	ASMI	NO	-	-	-	-	+
DEVARAGULU	60/M	518755D	ASMI	NO	-	+	+-	-	+
KANNIYAPPAN	70/M	219446D	AWMI	NO	-	+	+	+	-
SUMATHI	41/F	526400D	AWMI	NO	-	-	+	+	-
NATARAJAN	65/M	530051D	AWMI	NO	-	+	+	+	-
SASIKALA	53/F	117540D	ASMI	NO	-	+	+	+	+
CHINNASWAMY	75/M	395861D	AWMI	YES	TNK	+	+	-	+
ARJUNAN	78/M	526333D	IW+RV	YES	TNK	-	+	-	-
SEPTEMBER 2009									
NAME	A/S	H.I	MI	LYSED	AGENT	DM	HTN	DYS	SMK
MUTHUKARUPPAN	59/M	530402D	AWMI	YES	STK	-	-	+	+
DEVARAJ	60/M	472093C	AWMI	YES	STK	-	+	+	-
DHANNAMAL	37/F	543047D	AWMI	YES	STK	-	+	-	-
VENKATARAMAN	40/M	534853D	IW+RV+PW	YES	STK	-	_	-	-
NAGARAJAN	67/M	535088D	IW+RV	YES	STK	-	+	-	-
PANDURANJAN	65/M	535102D	AWMI	YES	STK	-	-	-	-
RANDHAMMAL	60/F	535111D	IW+RV+PW	YES	STK	+	+	+	-
GANESHAN	51/M	536934D	AWMI	YES	STK	+	+	+	-
BALARAM	53/M	536861D	AWMI	YES	STK	+	+	+	-
GNANU KUMAR	57/M	526403C	IW+RV	YES	STK	+	+	+	-
MARGABANDHU	51/M	535252D	AWMI	YES	STK	-	+	-	+
JOHN	49/M	535254D	IW+RV	YES	STK	-	-	+	-
DAYANANDAN	59/M	218691A	AWMI	YES	STK	-	-	+	-
SASIKALA	37/F	535438D	AWMI	YES	STK	+	-	+	-
VANNAMALAI	59/F	307305D	IW+RV	YES	STK	+	-	-	-
DEBABRATH	59/M	537687D	IW+RV	YES	STK	-	-	+	+
ABDUL BASHEER	51/M	540051D	IW+RV	YES	STK	-	-	+	-
GEETHA	56/F	734160C	IW+RV	YES	STK	-	-	-	-
ARSADS SEELAM	63/M	864517B	IW+RV	YES	STK	+	+-	-	+
DHARANI	47/F	540204D	IW+PW	YES	STK	+	+	+	-
BABU	37/M	640758D	AWMI	YES	STK	-	+	+	-
AMRASAL	58/M	541705D	AWMI	YES	STK	+	+	+	-
SRINIVASAN	57/M	544138D	IW+RV	YES	STK	+	+	+	+
MURALI	37/M	544139D	IW+RV	YES	STK	+	+	-	+
MUNAF	61/M	540266D	IW+RV	YES	STK	-	+	-	-
LAKSHMANAN	70/M	544371D	AWMI	YES	STK	+	+	-	+
GANESAN	70/M	544376D	AWMI	YES	STK	+	-	+	+
VIJAYAN	65/M	545387D	AWMI	YES	STK	-	-	+	+
MUNUSWAMY	70/M	544448D	AWMI	YES	STK	-	+	+	-
RAZAMA BEE	85/F	546296D	IW+RV	YES	STK	-	+	-	-
CHANCHALA	60/F	544006D	IW+RV	YES	STK	-	_	-	-
KULANDAI	55/M	535138D	IW+RV	NO	-	-	+	-	-
SHANTHI	60/F	544036D	AWMI	NO	-	-	-	-	+
SIVAJI	40/M	544076D	ALMI	NO	-	+	+	+	-
SUBRAMANIUM	65/M	549373D	IW+RV	NO	-	+	+	+	-
SURESH KUMAR	47/M	540170D	ASMI	NO	-	+	+	+	-
JEYACHANDRAN	50/M	554332D	AWMI	NO	-	+	+	+	-
CHINNAKANNA	90/M	544158D	IWMI	NO	-	-	+	-	+
VENUGOPAL	47/M	533115D	IW+RV	YES	TNK	-	-	+	-

GOPAL NAIDU	62/M	539520D	AWMI	YES	TNK	-	+	-	+
SHANKER	50/M	544432D	AWMI	YES	TNK	-	_	-	-
SRINIVASAN	73/M	266122D	AWMI	YES	TNK	-	+	-	-
VELUMANI	61/F	461521D	IW+RV	YES	TNK	-	-	-	-
OCTOBER 2009									
NAME	A/S	H.N	MI	LYSED	AGENT	DM	HTN	DYS	SMK-
SASHI KUMAR	31/M	549389D	AWMI	YES	STK	+	+	+	-
DURAI	75/M	549593D	AWMI	YES	STK	+	+	+	-
KAMALAKANNAN	35/M	549398D	AWMI	YES	STK	-	+	-	+
SUNDARAJAN	52/M	549394D	AWMI	YES	STK	-	-	+	-
NARAYAN SWAMY	62/M	330903C	AWMI	YES	STK	-	-	+	-
PANDYA RAJAN	73/M	557962D	AWMI	YES	STK	+	-	+	-
BABAN	53/M	554004D	IWMI	YES	STK	+	-	-	-
RAJINDRAN	55/M	554014D	AWMI	YES	STK	-	-	+	+
KANNIYAPPAN	60/M	079028C	AWMI	YES	STK	-	-	+	-
AKBAR BASHA	40/M	554170D	IWMI	YES	STK	-	-	-	+
ARUMUGAM	44/M	554238D	IW+RV	YES	STK	+	+-	-	+
GOVINDA SWAMY	35/M	554262D	AWMI	YES	STK	+	+	+	-
ZABUNNISHA	48/F	554336D	IW+PW	YES	STK	-	+	+	-
SEKAR	45/M	554393D	IW+RV	YES	STK	+	+	+	-
AREEL SELVI	58/F	554403D	LWMI	YES	STK	+	+	+	+
ARUMUGAM	60/M	554448D	AWMI	YES	STK	+	+	-	+
MURUGESAN	60/M	554504D	IW+RV	YES	STK	-	+	-	-
SANKAR	56/M	554581D	AWMI	YES	STK	+	+	-	+
JAYACHANDRAN	66/M	554573D	IW+RV	YES	STK	+	-	+	+
PERUMAL	60/M	076983D	IW+PW	YES	STK	-	-	+	+
UMA	58/F	559201D	AWMI	YES	STK	-	+	+	-
RATHNAMANDVI	70/M	559246D	IW+RV	YES	STK	-	+	-	+
NAMCHIVEYAM	43/M	559234D	IW+RV	YES	STK	-	_	-	-
THANGA VELU	68/M	563616D	AWMI	YES	STK	-	+	-	-
ABU	75/M	562009D	AWMI	YES	STK	-	-	-	+
CHINNAPPAN	72/M	157833D	RV+LW	YES	STK	+	+	+	-
PICHANDI	53/M	563692D	IW+RV+PW	YES	STK	+	+	+	-
DAKSHNAMOORTHY	48/M	563987D	AWMI	YES	STK	+	+	+	-
RAJA MANI	60/M	563554D	AWMI	YES	STK	+	+	+	-
SADAGOPAN	65/M	449298D	AWMI	YES	STK	-	+	-	+
SAMUEL VICTOR	62/M	561175D	AWMI	YES	STK	-	-	+	-
SELVARAJ	60/M	567349D	IW+PW+LW	YES	STK	-	-	+	-
RAMANATHAN	62/M	566798D	IW+PW+LW	YES	STK	+	-	+	-
MANICKAM	69/M	567386D	AWMI	YES	STK	+	-	-	-
MALAY ACHAY	49/M	562048D	IWMI	YES	STK	-	-	+	+
GOUTHAM	38/M	568511D	ASMI	YES	STK	-	-	+	-
MD ALI	52/M	572028D	AWMI	YES	STK	-	-	-	+
GNANASWAMY	74/F	572072D	IWMI	YES	STK	+	+-	-	-
PRABHU	47/M	572012D	AWMI	YES	STK	+	+	+	-
SEKAR	44/M	572170D	ASMI	YES	STK	-	+	+	-
DESINGU	60/M	572155D	AWMI	YES	STK	+	+	+	-
PANEER SELVAM	50/M	563605D	ASMI	NO	-	+	+	+	+
PATTAMAL	70/F	563997D	AWMI	NO	-	+	+	-	-
GOPAL M	65/M	559226D	AWMI	YES	TNK	-	+	-	-
NOVEMBER 2009									
NAME	A/S	H.N	MI	LYSED	AGENT	DM	HTN	DYS	SMK
SEKAR	44/M	572170D	ASMI	YES	STK	-	-	+	+
DESINGLU	60/M	572155D	AWMI	YES	STK	-	+	+	-
SHEKH RAHMATH	56/M	574016D	AWMI	YES	STK	-	+	-	+
DAKSHINAMOORTHY	68/M	572391D	IW+RV+PW	YES	STK	-	_	-	-
THIYAGAN	60/M	572437D	AWMI	YES	STK	-	+	-	-
MOORTHY	53/M	572464D	IW+RV+PW	YES	STK	-	-	-	+
SALEEM AHMAD	42/M	572465D	AWMI	YES	STK	+	+	+	-
KANNIAH NAIDU	46/M	572467D	ASMI	YES	STK	+	+	+	-
VASANTHAN	60/M	831592A	IW+RV	YES	STK	+	+	+	-
SRINIVASAN	50/M	577024D	IW+RV	YES	STK	+	+	+	-

SAMIULLAH	48/M	577039D	AWMI	YES	STK	-	+	-	+
ISAI AMUTHA	52/M	577864D	AWMI	YES	STK	-	-	+	-
RAMAMOORTHY	60/M	577958D	IW+RV+PW	YES	STK	-	+	-	+
ABDUL MAJEED	71/M	577131D	IW+PW	YES	STK	-	_	-	-
SUNDERMOORTHY	56/M	004300D	IW+RV+PW	YES	STK	-	+	-	-
BABU	55/M	577154D	IW=RV	YES	STK	-	-	-	+
ABDUL KHADAR	64/M	577179D	AWMI	YES	STK	+	+	+	-
LAKSHMANAN	59/M	577200D	ASMI	YES	STK	+	+	+	-
SARAVANAN	39/M	580631D	AWMI	YES	STK	+	+	+	-
SHAMEEN	60/M	577369D	AWMI	YES	STK	+	+	+	-
RADHAKRISHNAN	55/M	577430D	AWMI	YES	STK	-	+	-	+
GOPAL	45/M	577438D	AWMI	YES	STK	-	-	+	-
DURAISWAMY	50/M	577459D	IWMI	YES	STK	-	-	+	-
REDDAPPA	36/M	584128D	AWMI	YES	STK	+	-	+	-
BALAKRISNAN	50/M	583007D	AWMI	YES	STK	+	-	-	-
LOGANATHAN	53/M	582064D	IW+RV	YES	STK	-	-	+	+
GOUTHAMAM	48/M	582097D	ASMI	YES	STK	-	-	+	-
JEEWAMMA	45/F	575215D	IW+RV	YES	STK	-	-	-	-
MANIVANAN	45/M	582095D	AWMI	YES	STK	+	+-	-	+
RANGANYOGI	66/F	582173D	IW+RV	YES	STK	+	+	+	-
GOVINDASWAMY	90/M	582324D	IW+RV	YES	STK	-	+	+	-
MAHABOOB BASHA	59/M	647177C	AWMI	YES	STK	+	+	+	-
ALPHONSAAUGUSTIN	56/F	585641D	IW+RV+PW	YES	STK	+	+	+	+
NATESAN	65/M	582461D	AWMI	YES	STK	+	+	-	+
ARUMUGAM	53/M	582554D	AWMI	YES	STK	-	+	-	-
MOLA	48/M	588079D	AWMI	YES	STK	+	+	-	+
SAMPATH	75/M	588089D	AWMI	YES	STK	+	-	+	+
AHMED BASHA	35/M	588148D	IWMI	YES	STK	-	-	+	+
MANI	60/M	490277A	IWMI	YES	STK	-	+	+	-
PARSURAMAM	40/M	588210D	AWMI	YES	STK	-	+	-	+
KUMAR	55/M	588256D	AWMI	YES	STK	-	_	-	-
BABU	47/M	591020D	IW+RV	YES	STK	-	+	-	-
THANGAMANI	46/M	591053D	IW+RV	YES	STK	-	-	-	+
VIVANATHAN	62/M	591215D	AWMI	YES	STK	+	+	+	-
SUBRAMANI	70/M	591218D	AWMI	YES	STK	+	+	+	-
RANGASAMY	60/M	591269D	AWMI	YES	STK	+	+	+	-
PRABHAKARAN	52/M	591316D	IW+RV	YES	STK	+	+	+	-
ILAYARAJAN	34/M	591369D	IW+PW	YES	STK	-	+	-	+
MURUGAIAN	62/M	591378D	AWMI	YES	STK	-	-	+	-
PATTAMAL	70/F	563997D	AWMI	NO	-	-	-	+	-
VISHWANATHAN	40/M	572195D	AWMI	NO	-	+	-	+	-
THEVUNA	51/M	563797D	AWMI	NO	-	+	-	-	-
DHANPAL	55/M	578871D	AW+RBBB	NO	-	-	-	+	+
JEWEL SARKAN	35/M	579778D	IWMI	NO	-	-	-	+	-
RAMESH	45/M	582344D	ASMI	NO	-	-	-	-	+
YASODAMMAL	70/F	592744B	AWMI	NO	-	+	+-	-	+
ESAN	71/M	480428D	AWMI	NO	-	+	+	+	-
NARAYANASWAMY	45/M	850868C	IWMI	NO	-	-	+	+	-
PASHAYAMMAL	76/F	591700D	AWMI	NO	-	+	+	+	-
SUBRAMANI	50/M	597146D	IW+CHB	NO	-	+	+	+	+
KANNAYIRAM	58/M	572593D	AWMI	YES	TNK	+	+	-	+
SUNDER RAJAN	59/M	585806A	AWMI	YES	TNK	-	+	-	-
SELVAM	62/M	591074D	AWMI	YES	TNK	+	+	-	+
RAVI	43/M	591331D	AWMI	YES	TNK	+	-	+	+
DECEMBER 2009									
NAME	A/S	H.N	MI	LYSED	AGENT	DM	HTN	DYS	SMK
MURUGESAN	60/M	591430D	IW+RV	YES	STK	-	+	-	+
PERUMAL	55/M	591412D	IW+RV	YES	STK	-	_	-	-
SAMPATH	49/M	591501D	AWMI	YES	STK	-	+	-	-
SAI	55/M	591543D	IW+RV	YES	STK	-	-	-	+
JEYA KUMARI	61/F	591698D	IW+RV	YES	STK	+	+	+	-
GOVINDASWAMY	46/M	424592D	IW+PW+RV	YES	STK	+	+	+	-
JEEVARATHNAM	50/M	597135D	IWMI	YES	STK	+	+	+	-
MOHAN	42/M	597736D	AWMI	YES	STK	+	+	+	-
SHANMUGAM	66/M	292934A	IWMI	YES	STK	-	+	-	+

SHANMUGARAJ	62/M	469344C	IW+RV	YES	STK	-	-	+	-
VASUDEVAN	38/M	597301D	AWMI	YES	STK	-	+	-	+
RADHAKRISHNAN	52/M	625608C	IWMI	YES	STK	-	_	-	-
ANWARA BEGUM	48/F	561521D	AWMI	YES	STK	-	+	-	-
THAMBI DURAI	55/M	597371D	IW+RV	YES	STK	-	-	-	+
BOOPALAN	52/M	597381D	IW+RV	YES	STK	+	+	+	-
ABDUL KHUDUS	35/M	557184D	IWMI	YES	STK	+	+	+	-
PURUSOTHAMAM	60/M	597463D	IW+PW+RV	YES	STK	+	+	+	-
KANNIAN	65/M	469839D	AWMI	YES	STK	+	+	+	-
NATARAJAN	52/M	603036D	AWMI	YES	STK	-	+	-	+
NITYANANDAN	63/M	603082D	AWMI	YES	STK	-	-	+	-
NEETHU KUMARI	26/F	603228D	AWMI	YES	STK	-	-	+	-
KUMAR	38/M	603264D	IW+RV	YES	STK	+	-	+	-
VINON BABY	30/M	603259D	AWMI	YES	STK	+	-	-	-
KANNIAN	63/M	603466D	AWMI	YES	STK	-	-	+	+
RATIQ KHAN	50/M	607544D	IW+PW	YES	STK	-	-	+	-
THAGAVEL	65/M	609266D	RV+PW	YES	STK	-	-	-	+
CHINNARAJI	62/M	608441D	AWMI	YES	STK	+	+-	-	+
SIVALINGAM	62/M	608492D	ASMI	YES	STK	+	+	+	-
KANNIAN	50/M	608541D	AWMI	YES	STK	-	+	+	-
THIRUNAVUTIARASAN	55/M	608552D	IW+RV	YES	STK	+	+	+	-
KANAGARAJ	49/M	608096D	AWMI	YES	STK	+	+	+	+
VENKATARAMNA	60/M	613101D	AWMI	YES	STK	+	+	-	+
SAMPATH	42/M	613108D	ASMI	YES	STK	-	+	-	-
RAJARATHNAM	50/M	597220D	IW+PW	NO	-	+	+	-	+
RAJENDRA	52/M	597307D	IW+RV	NO	-	+	-	+	+
SARASWATHIAMMA	61/F	079019D	AWMI	NO	-	-	-	+	-
POKUDIAMMAL	90/F	603120D	AWMI	NO	-	-	+	+	-
KRISNAN KUTTINAIR	87/M	603273D	IWMI	NO	-	-	+	-	+
GOPAL	85/M	400348D	ASMI	NO	-	-	_	-	-
JAGADAMMAL	52/F	608213D	AWMI	NO	-	-	+	-	-
GANESAN	56/M	087475D	ASMI	NO	-	-	-	-	+
VAITHIYALINGAM	70/M	608305D	ASMI	NO	-	+	+	+	-
SIVAJI	54/M	608535D	AWMI	NO	-	+	+	+	-
BALAJI	42/M	608438D	AWMI	NO	-	+	+	+	-
RAJAUPPAN	72/M	608576D	AWMI	NO	-	+	+	+	-
KAMALA	60/F	608004D	ASMI	NO	-	-	+	-	-
RAMASHANADNA	78/M	613117D	ASMI	NO		-	-	+	-
RAVI KUMAR	55/M	591453D	AWMI	YES	TNK	-	-	+	-
KUMAR	55/M	588256D	AWMI	YES	TNK	+	-	+	-
MARGABANDHU	65/M	604915D	AWMI	YES	TNK	+	-	-	-
VAITHYA LINGAM	70/M	608305D	AWMI	YES	TNK	-	-	+	+
PANEER SELVAM	68/M	582221D	IWMI	YES	TNK	-	-	+	-
PTCA 2009									
JANUARY									
GIRIBABU	34/M	355127D	AWMI		PTCA	+	+	+	-
MEENAKSI	51/M	389300D	AWMI		PTCA	-	+	+	-
JAMES	72/M	445656B	AWMI		PTCA	+	+	+	-
VARUTHAN	70/M	400045D	IWMI		PTCA	+	+	+	+
FEBRUARY									
DAMODARAN	55/M	410004D	AWMI		PTCA	-	-	+	-
RAJSEKARAN	47/M	410073D	AWMI		PTCA	+	+	-	+
RAMACHANDRAN	72/M	410137D	IWMI		PTCA	+	-	+	+
MANOKANAN	58/M	410799D	AWMI		PTCA	-	-	+	+
RAGAVAN	44/M	410170D	AWMI		PTCA	-	+	+	-
ARUMUGAM	63/M	412006D	AWMI		PTCA	-	+	-	+
VARADHAV	70/M	400045D	IWMI		PTCA	-	_	-	-
THANGARAJ	28/M	400188D	AWMI		PTCA	-	+	-	-
SUGUMAR	42/M	400248D	AWMI		PTCA	-	-	-	+
SIMON	62/M	033789C	IWMI		PTCA	+	+	+	-
MARCH									
KANDASWAMY	49/M	417664D	AWMI		PTCA	+	-	-	-

SANKAR	28/M	417712D	AWMI		PTCA	+	+	+	-
SURYA KALA	48/F	378401D	AWMI		PTCA	-	+	-	-
MURUGESAN	60/M	419018D	IWMI		PTCA	-	-	+	-
BALAMMA	55/F	419068D	AWMI		PTCA	-	+	-	-
BHARATHI	60/F	422132D	AWMI		PTCA	-	_	-	-
AMALAN JEYASEELAN	49/M	243885C	AWMI		PTCA	-	+	-	-
NARASIMHULU	62/M	422176D	AWMI		PTCA	-	-	-	+
GANANA SEKARAN	56/M	423819D	AWMI		PTCA	+	+	+	-
RADHARUKMANI	50/F	429107D	AWMI		PTCA	+	+	+	-
RAJAGOPAL	52/M	429250D	AWMI		PTCA	+	+	+	-
SREEVAMALA	65/M	429216D	IWMI		PTCA	+	+	+	-
APRIL									
GANESAN	57/M	436117D	AWMI		PTCA	-	-	+	-
MANOHARAN	66/M	436133D	IWMI		PTCA	-	-	+	-
THIRVANGADAM	87/M	447104D	AWMI		PTCA	+	-	+	-
BALUK PANDIT	47/M	446405D	AWMI		PTCA	+	-	-	-
MAY									
ANBARASU	50/M	709270B	AWMI		PTCA	-	-	+	-
KALAI ARASON	46/M	787110B	AWMI		PTCA	-	-	-	+
RAMA KUMAR	67/M	457127D	IWMI		PTCA	+	+-	-	+
KUMAR	53/M	457241D	IWMI		PTCA	+	+	+	-
JEBA KUMAR	59/M	740421A	IWMI		PTCA	-	+	+	-
JUNE									
MANIRATHINAM	52/M	469756D	AWMI		PTCA	+	+	+	+
ILLAYA RAJA	25/M	476717D	AWMI		PTCA	+	+	-	+
VITTOBA	58/M	480231D	IWMI		PTCA	-	+	-	-
MURUGESAN	51/M	484051D	AWMI		PTCA	+	+	-	+
JULY									
SOURIYAN HASRIS	58/M	490272D	IWMI		PTCA	-	-	+	+
SOUREY	53/M	403744D	IWMI		PTCA	-	+	+	-
KUMARAN	50/M	496339D	IWMI		PTCA	-	+	-	+
JACOB PREMANAND	47/M	493525D	AWMI		PTCA	-	_	-	-
GOBEL ANDREWS	47/M	501436D	AWMI		PTCA	-	+	-	-
ESWARI	78/M	225555D	AWMI		PTCA	-	-	-	+
BALAKATACHALAM	60/M	457047D	IWMI		PTCA	+	+	+	-
AUGUST									
JUBIN	46/M	518110D	IWMI		PTCA	+	+	+	-
SRINIVASAN	26/M	518137D	AWMI		PTCA	+	+	+	-
WILLIGRAM	52/M	525488D	AWMI		PTCA	-	+	-	+
NIR MOHAMMAD	69/M	344116B	AWMI		PTCA	-	-	+	-
SEPTEMBER									
DHANPAL	57/M	959559A	AWMI		PTCA	+	-	+	-
UDHAYA SURAYAN	40/M	535451D	AWMI		PTCA	+	-	-	-
OCTOBER									
DELVANNI	60/F	554107D	IWMI		PTCA	-	-	+	-
SIVADAS	53/M	628714C	IWMI		PTCA	-	-	-	+
NAGARAJ	74/M	563503D	AWMI		PTCA	+	+-	-	+
RAJAREDDY	74/M	567363D	IWMI		PTCA	+	+	+	-
LALITHAMAL	66/F	567700D	AWMI		PTCA	-	+	+	-
SIMSON ADVENT	66/M	470043D	IWMI		PTCA	+	+	+	-
NOVEMBER									
KALIL A	50/M	578261D	AWMI		PTCA	+	+	-	+
CHANDRASEKAR	56/M	582194D	AWMI		PTCA	-	+	-	-
DECEMER									
CHANDRASEKAR	57/M	594299D	IWMI		PTCA	+	-	+	+
MARGABANDU	82/M	604915D	AWMI		PTCA	-	-	+	+

January 2010									
NAME	A/S	H.N	MI	LYSED	AGENT	DM	HTN	DYS	SMK
SENTHAMURI	48/M	110960D	AWMI	YES	STK	-	_	-	-
AMEENBASHA	40/M	911046C	IWMI	YES	STK	-	+	-	-
ANTHONY	48/M	613175D	AWMI	YES	STK	-	-	-	+
SWAMINATHAN	47/M	220251D	AWMI	YES	STK	+	+	+	-
DURAI	48/M	613245D	IWMI	YES	STK	+	+	+	-
MANI	60/M	613263D	AWMI	YES	STK	+	+	+	-
GOVINDAN	49/M	611816D	IW+PW	YES	STK	+	+	+	-
MOHAN	45/M	613396D	AWMI	YES	STK	-	+	-	+
SRINIVASAN	36/M	614050D	AWMI	YES	STK	-	-	+	-
RAVENDRA	54/M	748410C	IW+RV	YES	STK	-	+	-	+
RAJA	47/M	449389B	AWMI	YES	STK	-	_	-	-
VENKATESAN	43/M	613465D	AWMI	YES	STK	-	+	-	-
PREMA	65/M	495449B	AWMI	NO	STK	-	-	-	+
VANAJA	32/F	616197D	AWMI	YES	STK	+	+	+	-
SAROJA	63/F	269661A	AWMI	YES	STK	+	+	+	-
PARAMASIVAM	67/M	075027C	AWMI	YES	STK	+	+	+	-
VEDANAYAGAM	57/M	616135D	IW+PW	YES	TNK	+	+	+	-
KUMARESAN	52/M	616111D	IW+RV	YES	STK	-	+	-	+
MOHAN	61/M	616228D	AWMI	YES	STK	-	-	+	-
SELVA ARASU	42/M	757536A	AWMI	YES	STK	-	-	+	-
KANNAIYSN	60/M	615789D	IW+RV	YES	TNK	+	-	+	-
DHANAMMA	64/F	870303	AWMI	NO	-	+	-	-	-
SANKER	55/M	618100D	AWMI	YES	STK	-	-	+	+
NATARAJAN	57/M	023854D	IW+RV	YES	STK	-	-	+	-
JAYPAL	60/M	616322D	AWMI	YES	STK	-	-	-	+
ANNAMALEI	65/M	616346D	LWMI	YES	STK	+	+-	-	+
ANUMUGAM	57/M	616377D	IW+RV	YES	STK	+	+	+	-
VISHNU	65/M	426323B	AWMI	NO	-	-	+	+	-
BHAKIA RAJ	33/M	616370D	AWMI	Yes	STK	+	+	+	-
SAROJA	60/F	269661A	AWMI	NO	-	+	+	+	-
VIJAYA	60/F	566423D	AWMI	YES	STK	+	+	-	-
SARAVANAN	44/M	620067D	IW+RV	YES	STK	-	+	-	-
KASTHURI	50/F	620079D	IW+RV	YES	STK	+	+	-	-
MUTHIYALAL	52/M	620105D	IW+RV	YES	STK	+	-	+	+
JANIMMA	50/F	620170D	IW+RV	YES	STK	-	-	+	+
KANNAN	60/M	620309D	IW+RV	YES	STK	-	+	+	-
KASINATHANAN	60/M	429307B	AWMI	NO	-	-	+	-	+
KANTA	36/F	620325D	AWMI	YES	STK	-	_	-	-
SANDHU	57/M	620324D	AWMI	YES	STK	-	+	-	-
ABDUL	61/M	621365D	AWMI	YES	STK	-	-	-	+
MADANGOPAL	64/M	620379D	AWMI	YES	STK	+	+	+	-
SAIDAR	40/M	505401D	IW+RV	YES	STK	+	+	+	-
ANUMUGAM	62/M	620451D	AWMI	NO	-	+	+	+	-
MAHALINGAM	48/M	620457D	IW+RV	YES	STK	+	+	+	-
RATHINAM	64/M	620459D	IW+RV	YES	STK	-	+	-	+
TAMILSELVAM	27/M	620472D	IW+RV	YES	STK	-	-	+	-
KANTHA	36/F	620325D	AWMI	YES	STK	-	-	+	-
DASARATHAN	51/M	893981C	IW+RV	YES	STK	+	-	+	-
VOMEATESAN	42/M	620503D	AWMI	YES	STK	+	-	-	-
VENKATESAN	52M	918665A	AWMI	YES	STK	-	-	+	+
ABDUL	57/M	523861D	IW+RV	YES	STK	-	-	+	-
ANNAMALAI	56/M	117119B	AWMI	YES	STK	-	-	-	+
PERUMAL	39/F	625120D	AWMI	YES	STK	+	+-	-	-
SHANKER	41/M	625151D	AWMI	YES	STK	+	+	+	-
KRISHNAN	80/M	625156D	AWMI	YES	STK	-	+	+	-
UDAYA	34/M	625179D	IWMI	YES	TNK	+	+	+	-
SUBRAMANI	64/M	625160D	AWMI	NO	-	+	+	+	+
BANUMATHI	52/F	625190D	AWMI	YES	STK	-	+	-	+
GANAPATHY	42/M	625196D	IW+RV	YES	STK	-	_	-	-
MANOKANAN	50/M	625248D	AWMI	YES	STK	-	+	-	-
KASTHURI	64/F	626719D	AWMI	YES	STK	-	-	-	-
HASSAN	58/M	626599D	AWMI	NO	-	+	+	+	-

BABISMMAL	52/F	627836D	IW+RV	YES	STK	+	+	+	-
RAMALINGAM	65/M	628303D	AWMI	YES	STK	+	+	+	-
SHANMUGAM	46/M	625293D	AWMI	YES	STK	+	+	+	-
RAMACHANDRAN	66/M	613259D	AW+LW	NO		-	+	-	+
RAJAMANICKAM	47/M	449389B	AWMI	YES	STK	-	-	+	-
SETAMMAL	66/F	616065D	IW+RV	YES	STK	-	-	+	-
WILSON	68/M	870303B	IW+PW	YES	STK	+	-	+	-
PALANI	54/M	616207D	IW+RV	YES	STK	+	-	-	-
SWAMINATHAN	46/M	220251D	AWMI	YES	STK	-	-	+	+
SELVA ARAJAN	42/M	757536D	AWMI	YES	STK	-	-	+	-
ANNAMALAI	68/M	616346D	LWMI	YES	STK	-	-	-	+
SHANKAR	55/M	618100D	AWMI	YES	STK	+	+-	-	+
MOHAN	43/M	613396D	AWMI	YES	STK	+	+	+	-
February 2010									
Gunasundaran	79/M	625463D	AWMI	YES	STK	+	+	+	-
Meenakshi	61/F	034772C	AWMI	YES	STK	+	+	+	-
Kothandamal	55/M	625337D	AWMI	YES	STK	+	+	-	+
Shankar	31/M	025594D	IW+RV	YES	STK	-	+	-	-
Kalyansundaram	48/M	630055D	AWMI	YES	STK	+	+	-	+
Sakunthalamma	75/F	630064D	AWMI	NO	-	+	-	+	-
Venkateshwar	36/M	630160D	AWMI	YES	STK	-	-	+	+
Venkatedri eddy	51/M	630176D	IW+RV	YES	STK	-	+	+	-
Nithyanandan	53/M	630260D	AWMI	YES	STK	-	+	-	+
Delhibabu	62/M	634068D	AWMI	YES	STK	-	_	-	-
Srinivaan	56/M	630425D	AWMI	YES	STK	-	+	-	-
Maniuel	68/M	630450D	AWMI	YES	STK	-	-	-	+
Subramanium	75/M	630440D	AWMI	YES	STK	+	+	+	-
Bhavani B	57/F	630462D	AWMI	NO	-	+	+	+	-
Arvind Pandey	55/M	538727C	AWMI	YES	STK	+	+	+	-
Yuvaraj	45/M	625211D	AWMI	YES	STK	+	+	+	-
Rajaram	38/M	634402D	AWMI	NO	-	-	+	-	+
Dasnagir	42/M	630499D	AWMI	YES	STK	-	-	+	-
Narasimhr eddy	84/M	638107D	AWMI	NO	-	-	-	+	-
Gopal	70/M	638125D	AWMI	YES	STK	+	-	+	-
Balarman	64/M	638731D	AWMI	YES	TNK	+	-	-	-
Sekar	49/M	638185D	IWMI	YES	STK	-	-	+	+
Banumathy	50/F	625190D	AWMI	NO	-	-	-	+	-
Chandrasekar	29/M	638391D	IW+RV	YES	STK	-	-	-	+
Govindarajan	59/M	639618D	AWMI	NO	-	+	+-	-	+
Sundarmoorthy	49/M	637685D	IW+PW	YES	STK	+	+	+	-
Sundarmoorthy	55/M	282666C	IWMI	YES	STK	-	+	+	-
Raja	47/M	638254D	AWMI	YES	STK	+	+	+	-
Rangemmal	60/M	638266D	AWMI	YES	STK	+	+	+	+
Prabhakaran	45/M	638423D	AWMI	YES	STK	+	+	-	+
Logaligam	64/M	638471D	AWMI	YES	STK	-	+	-	-
Shanmugam	76/M	638479D	AWMI	YES	STK	+	+	-	+
Samad bebi	65/F	641092D	LWMI	YES	STK	+	-	+	-
Rajammal	85/F	638496D	IWM	YES	STK	-	-	+	+
Vanathiyan	53/M	638530D	IW+RV	YES	STK	-	+	+	-
Mehrunisha	60/F	638536D	IW+RV	YES	STK	-	+	-	+
Kangaraj	47/M	644146D	IW+RV	YES	STK	-	_	-	-
Madan Mohan	58/M	642684D	IW+RV	YES	STK	-	+	-	-
Kannamal	55/F	644157D	IW+RV	YES	STK	-	-	-	-
Murgesan	47/M	644154D	AWMI	YES	STK	+	+	+	-
Jagathambal	80/F	960186C	IWMI	YES	STK	+	+	+	-
Vairavan	68/M	127322D	IWM	NO	-	+	+	+	-
Runsathanam	59/M	644215D	AWMI	YES	STK	+	+	+	-
Ponnuswami	51/M	644218D	IWMI	YES	STK	-	+	-	+
Indirani	70/F	645193D	IW+RV	YES	STK	-	_	-	-
Narayanan	62/M	644224D	AWMI	YES	STK	-	+	-	-
Abduka Suban	40/M	645865D	AWMI	NO	-	-	-	-	+
Anand	70/M	644230D	AWMI	YES	STK	+	+	+	-
Murugan	50/M	644271D	IWMI	YES	STK	+	+	+	-
Rathinammal	58/F	644355D	IW+RV	YES	STK	+	+	+	-

Kasinathan	52/M	795701A	IW+RV	YES	STK	+	+	+	-
LOGANATHAN	52/M	630264D	IW+LW	YES	STK	-	+	-	+
BHAVANI	54/M	630462D	AWMI	NO		-	-	+	-
LAKSHMI	52/M	634460D	IWMI	YES	URO	-	-	+	-
RANGAMMAL	60/F	638266D	AWMI	YES	STK	+	-	+	-
PERUMAL	85/M	638476D	AWMI	YES	STK	+	-	-	-
SAMAD BEVI	65/F	641092D	IW+RV	YES	STK	-	-	+	+
RADHAKRISHNAN	51/M	638531D	IW+RV	YES	STK	-	-	+	-
MALLICK BASHA	65/M	638509D	IWMI	YES	STK	-	-	-	+
SHANKAR KUMAR	60/M	640475D	AWMI	YES	STK	+	+-	-	+
MARANDICPEN	56/M	644353D	AWMI	TES	TNK	+	+	+	-
March 2010									
NAME	A/S	HN	MI	LYSED	AGENT	DM	HTN	Dys	Smo
Munawar	38/M	644395D	IW+RV	YES	STK	-	+	-	+
Siva Reddy	32/M	648014D	AWMI	YES	STK	-	_	-	-
Viayagam	75/M	400268D	AWMI	YES	STK	-	+	-	-
Govindan	49/M	648018D	AWMI	YES	STK	-	-	-	+
Ambikaammal	75/F	648167D	AWMI	YES	STK	+	+	+	-
Boopalan	59/M	648174D	AWMI	NO	-	+	+	+	-
Annamalai	80/M	649330D	AWMI	NO	-	+	+	+	-
Panchvarnam	70/F	868590C	AWMI	YES	STK	+	+	+	-
Manoharan	35/M	648271D	AWMI	YES	STK	-	+	-	+
Krishen	53/M	648305D	IW+RV	YES	STK	-	-	+	-
Thirumal Raj	65/M	648329D	IWMI	NO	-	-	-	+	-
Vinayagram	75/M	406268D	AWMI	NO	-	+	-	+	-
Vilvijayan	52/M	131922D	AWMI	YES	STK	+	-	-	-
Murali	47/M	648362D	IW+RV	YES	STK	-	-	+	+
Lalitha	57/F	648368D	IW+RV	YES	STK	-	-	+	-
Tharammal	59/F	648380D	IW+RV	YES	STK	-	-	-	-
Neelakandan	58/M	651305D	IW+RV	YES	STK	+	+-	-	+
Gopal	65/M	651348D	AWMI	YES	STK	+	+	+	-
Dhanpal	59/M	650966D	AWMI	YES	STK	-	+	+	-
Hasintaj	51/F	651921D	AWMI	NO	-	+	+	+	-
Jayalaksmi	52/F	652301D	IW+RV	YES	STK	+	+	+	-
Elumalai	34/M	653506D	AWMI	YES	STK	+	+	-	+
Velu	36/M	678968D	LWMI	YES	STK	-	+	-	-
Kannamal	70/F	658143D	LWMI	YES	STK	+	+	-	-
Sumit Kumar	55/M	650115D	AWMI	YES	STK	+	-	+	+
Govindaraj	68/M	658204D	AWMI	YES	STK	-	-	+	+
Arumugam	68/M	890264A	AWMI	NO	-	-	+	+	-
Vinayagam	68/M	658275D	IW+RV	YES	STK	-	+	-	+
Santakumari	62/F	659234D	IWMI	YES	STK	-	_	-	-
Rajammal	79/F	660014D	AWMI	NO	-	-	+	-	-
Kumaravel	39/M	660345D	IWMI	NO	-	-	-	-	+
Subramani	58/M	660912D	AWMI	YES	STK	+	+	+	-
Arvindasen	60/M	658345D	IW+RV	YES	STK	+	+	+	-
Devarajulu	58/M	658373D	AWMI	YES	STK	+	+	+	-
Prabhakaran	28/M	658377D	IWMI	NO	-	+	+	+	-
Sumathi	57/F	897813B	AWMI	NO	-	-	+	-	-
Narsimhan	70/M	661089D	IW+RV	YES	STK	-	-	+	-
Parvathi	70/F	661099D	AWMI	YES	STK	-	-	+	-
Manoharan	46/M	661170D	AWMI	YES	STK	+	-	+	-
Thangavelu	70/M	664337D	IW+RV	YES	STK	+	-	-	-
Karunakaran	55/M	664335D	AWMI	YES	STK	-	-	+	+
Radhakrishanan	65/M	661232D	IW+RV	YES	TNK	-	-	+	-
Shanmugam	71/M	661236D	AWMI	YES	STK	-	-	-	+
Leslee	58/M	210971D	IW+LW	YES	STK	+	+-	-	+
Sivanandhan	22/M	700914B	IWMI	YES	STK	+	+	+	-
Mahendran	51/M	661267D	AWMI	YES	STK	-	+	+	-
Nithyanandan	72/M	616442D	IW+RV	YES	STK	+	+	+	-
Naglingam	59/M	661428D	IWMI	YES	STK	+	+	+	+
Abdul Ali	65/M	661458D	IW+PW	YES	STK	+	+	-	+
Subramani	65/M	667858D	IW+PW	YES	STK	-	+	-	-
Bathula Bee	65/F	661595D	AWMI	YES	STK	+	+	-	-

Sukumar	32/M	661598D	AWMI	YES	STK	+	-	+	+
RATHINAMMAL	58/F	644355D	IW+RV	YES	STK	-	-	+	+
MUNAWAR AHMED	38/M	644397D	IW+RV	YES	STK	-	+	+	-
JAYALAKSHMI	52/F	652301D	AWMI	YES	STK	-	+	-	+
GOPAL	65/M	651348D	IWMI	YES	STK	-	_	-	-
DHANPAL	59/M	650966D	AWMI	YES	STK	-	+	-	-
PARWATHY	70/F	661099D	AWMI	YES	STK	-	-	-	-
KARUNAKARAN	64/M	661276D	AWMI	YES	STK	+	+	+	-
SHANMUGAM	71/M	661236D	AWMI	YES	STK	+	+	+	-
RANGASWAMY	48/M	669404D	AWMI	YES	TNK	+	+	+	-
MURALIDHARAN	36/M	648399D	IW+RV	YES	TNK	+	+	+	-
APRIL 2010									
NAME	A/S	H.N	MI	LYSED	AGENT	DM	HTN	DYS	SMK
Murugesan	40/M	669473d	IW+RV	NO	-	-	-	+	-
Chinnathampi	65/M	669506d	AWMI	Yes	STK	-	+	-	+
Subramani	40/M	669657d	AWMI	Yes	STK	-	_	-	-
Sarvanan	37/M	000253d	IWMI	Yes	STK	-	+	-	-
AnwarBasha	60/M	669671d	AWMI	NO	-	-	-	-	+
Yesudas	59/M	669747d	AWMI	Yes	STK	+	+	+	-
Kelliamba	80/F	037916d	IW+RV	Yes	STK	+	+	+	-
Babu	45/M	669794d	IW+RV	NO	-	+	+	+	-
Rajammal	80/F	660014d	AWMI	Yes	STK	+	+	+	-
Muthuswami	70/M	663686d	AWMI	Yes	STK	-	+	-	+
Aramugam	68/M	669850d	IW+RV	Yes	STK	-	-	+	-
Mohd Karim	70/M	669932d	AWMI	Yes	STK	-	-	+	-
Ramu	45/M	669960d	IWMI	Yes	STK	+	-	+	-
Kannadesam	57/M	164736d	AWMI	Yes	STK	+	-	-	-
Damodaran	62/M	670000d	AWMI	Yes	STK	-	-	+	+
Gunasundari	68/M	670023d	IW+PW	NO	-	-	-	+	-
Sohramani	60/M	667858d	IW+RV	Yes	STK	-	-	-	+
Naarajan	75/M	674099d	IW+RV	Yes	STK	+	+-	-	+
Jayantikumari	57/M	157963c	AWMI	Yes	STK	+	+	+	-
Kishan	63/M	674140d	IW+RV	Yes	STK	-	+	+	-
Rajesh Kumar	28/M	674216d	IW+RV	Yes	STK	+	+	+	-
Vekata ratha	59/M	674219d	IW+RV	Yes	STK	+	+	+	+
Seshachalan	63/M	345436c	IW+RV	Yes	STK	+	+	-	+
Mohanan	59/M	893280c	IWMI	NO	-	-	+	-	-
Sarvanan	28/M	674274d	AWMI	Yes	STK	+	+	-	+
Vijay kumar	36/M	674288d	AWMI	Yes	STK	+	-	+	+
Shantha kumar	50/F	674281d	IW+RV	Yes	STK	-	-	+	-
Ganeshan	41/M	674282d	AWMI	Yes	STK	-	+	+	-
Chinnathambi	75/M	674303d	IWMI	NO	-	-	+	-	+
Shahai joseph	48/M	601302d	AWMI	Yes	STK	-	_	-	-
Murgesh	41/M	676818d	AWMI	Yes	STK	-	+	-	-
Ibrahim	44/M	559287d	AWMI	NO	-	-	-	-	+
Dharani	53/F	677966d	AWMI	Yes	STK	+	+	+	-
Govaidasami	50/M	400636c	AWMI	Yes	STK	+	+	+	-
Subramani	55/M	674510d	IW+RV	Yes	STK	+	+	+	-
Salauddin	65/M	675776d	AWMI	Yes	STK	+	+	+	-
Elumalai	33/M	674521d	AWMI	Yes	STK	-	+	-	+
Mahadevan	52/M	674556d	AWMI	NO	-	-	-	+	-
Sampathraj	57/M	478548d	IW+PW	NO	-	-	-	+	-
Knnairam	64/M	680030d	IW+RV	Yes	STK	+	-	+	-
Innayathullah	56/M	680035d	AWMI	Yes	STK	+	-	-	-
Mohd Basha	52/M	680039d	AWMI	Yes	STK	-	-	+	+
Munniah	51/M	512596c	AWM I	Yes	TNK	-	-	+	-
Budamalai	53/M	387697d	AWMI	Yes	STK	-	-	-	+
Mutthu	57/M	680199d	AWMI	Yes	STK	-	+	-	+
Venkatesh	45/M	680206d	AWMI	Yes	STK	-	_	-	-
Faiz Ahmed	37/F	893192c	AWMI	Yes	STK	-	+	-	-
Chan Begum	73/F	242507c	AW MI	Yes	STK	-	-	-	-
Rajareddy	37/M	680241d	AWMI	Yes	STK	+	+	+	-
Jothiranjan	48/M	680884d	AWMI	Yes	STK	+	+	+	-
Gangadharan	84/M	999274c	IW+LW	Yes	STK	+	+	+	-

Selvaraj	66/M	681889d	AWMI	YES	STK	+	+	+	-
Murgesan	54/M	680353d	AWMI	YES	STK	-	+	-	+
Janagiraman	70/F	680898d	IW+RV	YES	STK	-	-	+	-
Selvaraj	45/M	686062d	AWMI	YES	STK	-	-	+	-
Mohd Allah	60/M	686088d	AWMI	YES	STK	+	-	+	-
Kaderbasha	55/M	686115d	AWMI	YES	STK	+	-	-	-
Sabun	52/M	686162d	AWMI	NO	-	-	-	+	+
Durai	44/M	686164d	AWMI	YES	STK	-	-	+	-
Narasimah	75/M	687724d	IW+RV	YES	STK	-	-	-	+
Udaisankar	78/M	687580d	IW+RV	YES	STK	+	+-	-	+
Samuel	60M	686229d	AWMI	YES	STK	+	+	+	-
Paneerselvum	50/M	102959c	IW+RV	YES	STK	-	+	+	-
Kumar	40/M	669676d	AWMI	YES	STK	+	+	+	-
SARVANAN	28/M	674274D	ASMI	YES	STK	+	+	+	+
GANGADHARN	53/M	674316D	AWMI	YES	STK	+	+	-	+
NISAHAYA JOSEPH	48/M	601302C	ASMI	YES	STK	-	+	-	-
DURAI	60/M	682042D	IWMI	NO		+	+	-	+
KARUNAKARAN	56/M	511753D	AWMI	YES	STK	+	-	+	+
CHANDRAN	53/M	682987D	IW+RV	YES	STK	-	-	+	+
PALANI	49/M	069278B	IW+PW+LW	NO		-	+	+	-
SELVARAJ	66/M	681889D	AWMI	YES	STK	-	+	-	+
MAY 2010									
Name	A/S	H.No	MI	LYESD	Agent	DM	HTN	DYS	SMK-
Mohanavelu	60/M	688877D	AWMI	Yes	STK	-	-	-	+
Ramanan	45/M	686269D	IW+RV	Yes	STK	+	+	+	-
Janakiraman	62/M	686270C	AWMI	No	-	+	+	+	-
Ananolan	60/M	686421D	AWMI	Yes	STK	+	+	+	-
Vijayakumar	50/M	686451D	AWMI	Yes	STK	+	+	+	-
Ramachandran	34/M	686516D	AWMI	Yes	STK	-	+	-	+
Sivaprakasan	50/M	686532D	IW+RV	Yes	STK	-	-	+	-
Chanbasha	48/M	686583D	AWMI	Yes	STK	-	-	+	-
Ramachandran	58/M	686516D	AWMI	No	-	+	-	+	-
Dhanpal	59/M	650966D	AWMI	No	-	+	-	-	-
Vairavan	66/M	692215D	IW+RV	Yes	STK	-	-	+	+
Thyagrajan	53/M	692339D	AWMI	Yes	STK	-	-	+	-
Babu	49/M	692758d	IWMI	Yes	STK	-	-	-	+
Manikandan	70/M	693094d	AWMI	Yes	STK	+	+-	-	+
Elumalai	35/M	693208d	IW+RV	Yes	STK	+	+	+	-
Balaram	58/M	693213d	IW+RV	Yes	STK	-	+	+	-
Samiappan	70/M	693241d	IW+RV	No	-	+	+	+	-
Gajendran	60/M	693248d	IW+RV	Yes	STK	+	+	+	+
Rafeeq	65/M	693319d	AWMI	Yes	STK	+	+	-	+
Kumar	55/M	693305d	IW+RV	Yes	STK	-	+	-	-
Ravindran	48/M	695372d	AWMI	Yes	STK	+	+	-	+
Munniswamy	62/M	697034d	AWMI	Yes	STK	+	-	+	+
Mohanvelu	59/M	693381d	AWMI	Yes	STK	-	-	+	+
Peterarunugam	62/M	693394d	IW+RV	Yes	STK	-	+	+	-
Nesmani	62/F	693397d	IW+RV	Yes	STK	-	+	-	-
Ramachandran	70/M	693399d	AWMI	No	-	-	_	-	-
Dayalan	60/M	693473d	AWMI	Yes	STK	-	+	-	-
Susanna	62/M	693495d	AWMI	Yes	STK	-	-	-	+
Sekharpaul	52/M	690057d	IW+RV	Yes	STK	+	+	+	-
Ekambaran	60/M	693532d	AWMI	Yes	STK	+	+	+	-
Alliabee	65/F	693541d	AWMI	Yes	STK	+	+	+	-
Changamnaidu	70/M	693590d	IW+RV	Yes	STK	+	+	+	-
Amaravati	65/F	701310D	AWMI	Yes	STK	-	+	-	-
Jyachandran	23/M	697852D	AWMI	Yes	STK	-	-	+	-
Saffiruddin	60/M	701133D	AW MI	Yes	STK	-	+	-	+
Anand sekar	53/M	698312D	AWMI	No	-	-	_	-	-
Sundaram	52/M	698822D	AWMI	Yes	STK	-	+	-	-
Munniyappan	60/M	699685D	AWMI	No	-	-	-	-	+
Udaivelu	69/M	591322B	IWMI	No	-	+	+	+	-
Velu	55/M	702448D	AWMI	Yes	STK	+	+	+	-
Venkatesan	35/M	701501D	AWMI	Yes	STK	+	+	+	-

Selvaraj	66/M	701502D	IW+RV	Yes	STK	+	+	+	-
Deviki	60/F	649808B	IWMI	Yes	STK	-	+	-	-
Periyaswami	75/M	965795B	AWMI	Yes	STK	-	-	+	-
Tamilselvi	40/F	867861B	AWMI	Yes	STK	-	-	+	-
Dayalan	58/M	229457C	AWMI	Yes	STK	+	-	+	-
Sugana	70/F	701417D	AWMI	Yes	TNK	+	-	-	-
Shansheery	68/M	704518D	AWMI	Yes	STK	-	-	+	+
Thirupuram	60/F	264216D	AWMI	Yes	STK	-	-	+	-
Arumugam	50/M	701476D	AWMI	Yes	STK	-	-	-	+
Durairaj	53/M	708059D	IW+RV	Yes	STK	+	+-	-	+
Raju	56/M	704149D	AWMI	Yes	STK	+	+	+	-
Geetha	45/F	708064D	AWMI	Yes	STK	-	+	+	-
Thirumalai	69/M	705494D	AWMI	Yes	STK	+	+	+	-
Arumugam	58/M	582554D	IW+MI	Yes	URO	+	+	+	+
Koteswari	74/F	708183D	AWMI	Yes	STK	+	+	-	-
Shanmugam	45/M	708236D	IW+RV	Yes	STK	-	+	-	-
Umarani	52/F	708262D	IWMI	Yes	STK	+	+	-	-
Rahgu	55/M	704149D	AWMI	Yes	STK	+	-	+	+
Ranjan	39/M	708287D	AWMI	Yes	STK	-	-	+	+
CHANBASHA	55/M	686583D	AWMI	YES	STK	-	+	+	-
RAVINDRAN	41/M	695372D	AWMI	YES	STK	-	+	-	+
MEENAKSHI	47/F	693051D	AWMI	YES	STK	-	_	-	-
SOURIYAPPAN	71/M	693241D	IW+PW+RV	NO		-	+	-	-
PONNUSWAMY	62/M	697034D	AWMI	YES	STK	-	-	-	+
PARANTHAMAN	60/M	693534D	IWMI	YES	STK	+	+	+	-
SUSANA	66/M	693495D	ASMI	YES	STK	+	+	+	-
SAMPATH	62/M	701332D	IW+LW	YES	STK	+	+	+	-
RAJKUMAR	56/M	701391D	IW+RV	YES	STK	+	+	+	-
SUNDARAM	56/M	698822D	AWMI	YES	STK	-	+	-	+
MOHANVELLU	57/M	643381D	AWMI	YES	STK	-	-	+	-
SELVARAJ	60/M	701520D	IW+RV	YES	STK	-	-	+	-
MOHAN NAIDU	59/M	905048A	AWMI	YES	STK	+	-	+	-
JAYARAMAN	55/M	689326D	AWMI	YES	STK	+	-	-	-
JAYASEELAM	55/M	397506C	AWMI	YES	STK	-	-	+	+
DAYALAN	52/M	229457C	AWMI	YES	STK	-	-	+	-
RAVINDRAN	42/M	695372D	AWMI	YES	STK	-	-	-	+
KRISHANAN	69/M	157364C	IW+PW	YES	TNK	+	+-	-	+
KOTTESWARIAMMAL	75/M	708183D	IW+RV	YES	STK	+	+	+	-

JUNE 2010

NAME	A/S	HN	MI	Lysed	Agent	DM	HT	Dys	Smo
Anantpadmanabhan	45/M	708334d	AWMI	yes	STK	+	+	-	+
Siva	38/M	707389d	AWMI	yes	STK	-	+	-	-
Pradhalan	52/M	709131D	AWMI	No	-	+	+	-	+
Vijay	23/M	682383D	AWMI	No	-	+	-	+	+
Bothukesavan	58/M	711010D	AWMI	Yes	STK	-	-	+	+
Babu	62/M	703508D	IW+RV	Yes	STK	-	+	+	-
Krishnamoorthy	69/M	708526D	AWMI	Yes	TNK	-	+	-	+
Kalyani	45/M	1699489C	AWMI	Yes	STK	-	_	-	-
Sekar	49/M	457330C	IW+RV	Yes	TNK	-	+	-	-
Venkatesan	49/M	712144D	AWMI	Yes	STK	-	-	-	+
ThirumalaiNaidu	69/M	712138D	AWMI	Yes	STK	+	+	+	-
Ahmed Basha	52/M	712178D	IW+RV	Yes	TNK	+	+	+	-
Samson	39/M	711097D	IW+RV	Yes	STK	+	+	+	-
Natarajan	57/M	712228D	AWMI	Yes	STK	+	+	+	-
Sakthivel	50/M	714819D	AWMI	Yes	STK	-	+	-	+
Jambulingam	68/M	713363D	AWMI	Yes	STK	-	-	+	-
Chandrasekhar	56/M	713150D	AWMI	Yes	STK	-	-	+	-
Subramani	74/M	712260D	AWMI	Yes	STK	+	-	+	-
Kumarvel	39/M	712305D	AWMI	Yes	STK	+	-	-	-
Sagunthala	68/F	712354D	AWMI	Yes	STK	-	-	+	-
Aruldas	36/M	712352D	AWMI	Yes	STK	-	-	+	-
Gandhi	65/M	712400D	AWMI	Yes	STK	-	-	-	+
Narayanan	78/M	758755D	AWMI	Yes	STK	+	+-	-	+
Govindaraj	70/M	712468D	IW+RV	Yes	STK	+	+	+	-
Lakhsiammal	75/F	712510D	AWMI	Yes	TNK	-	+	+	-
Ramesh Babu	44/M	716351D	AWMI	Yes	STK	+	+	+	-
Boopethi	45/M	716442D	AWMI	Yes	STK	+	+	+	+
Rajendran	56/F	716372D	AWMI	Yes	STK	+	+	-	-
Nagarajan	68/M	606139D	AWMI	Yes	TNK	-	+	-	-
Salim Basha	51/M	71222D	AWMI	Yes	STK	+	+	-	+
Syed Mustafa	52/M	720470D	IW+RV	Yes	STK	+	-	+	+
Hasmuthullah	55/M	719009D	AWMI	No	-	-	-	+	+
Bhanuprasad Das	64/M	712598D	IW+RV	Yes	STK	-	+	+	-
Gopal	65/M	719008D	IW+RV	Yes	STK	-	+	-	+
Manglalakhsmi	66/F	141456D	AWMI	Yes	STK	-	_	-	-
Nagappan	39/M	719055D	AWMI	Yes	TNK	-	+	-	-
Mahalingam	56/M	719056D	AWMI	No	STK	-	-	-	+
Vijayan	54/M	719106D	AWMI	Yes	STK	+	+	+	-
Kastoori	45/F	719136D	AWMI	Yes	STK	+	+	+	-
Kuppu	60/M	719280D	IW+RV	No	-	+	+	+	-
Gnanalekha	31/M	488533D	IW+RV	No	-	+	+	+	-
Punniah	55/M	719474D	IW+RV	Yes	STK	-	+	-	+
Gopal	60/M	719485D	AWMI	Yes	STK	-	-	+	-
Sundarmoorthy	62/M	111186D	AWMI	No	-	-	-	+	-
Teekaram	40/M	722623D	AWMI	Yes	STK	+	-	+	-
Yuvaraj	27/M	723087D	IW+RV	Yes	STK	+	-	-	-
Shankar	55/M	723503D	AWMI	Yes	STK	-	-	+	+
Senthilvelan	47/M	723659D	AWMI	Yes	STK	-	-	+	-
Muniswamy	70/M	725280D	IW+RV	Yes	STK	-	-	-	+
Malliga	73/F	719555D	AWMI	Yes	TNK	+	+-	-	-
Sundarammal	78/F	726181D	IWMI	Yes	STK	+	+	+	-
SathishBabu	39/M	693353D	AWMI	Yes	STK	-	+	+	-
Nazeer	65/M	719598D	AWMI	Yes	STK	+	+	+	-
Anbalangam	45/M	724011D	AWMI	No	STK	+	+	+	+
Preethi	55/F	724024D	AWMI	No	STK	+	+	-	-
Selvum	34/M	122487D	AWMI	Yes	STK	-	+	-	-
Anthony	70/M	461397	IW+RV	Yes	STK	+	+	-	+
Govindaswami	50/M	724113D	AWMI	Yes	TNK	+	-	+	+
Saraswati	55/F	288347D	AWMI	Yes	STK	-	-	+	-
Duraiswamy	75/M	724178D	AWMI	Yes	STK	-	+	+	-
Rangasami	62/M	724176D	AWMI	Yes	STK	-	+	-	+

Vijayan	**45/M**	**724183D**	**AWMI**	**Yes**	**STK**	**-**	**_**	**-**	**-**
Sigamani	**55/M**	**719417D**	**IW+RV**	**Yes**	**STK**	**-**	**+**	**-**	**-**
Banu	**45/M**	**724213D**	**IW+RV**	**Yes**	**STK**	**-**	**-**	**-**	**+**
Malarkodi	**52/F**	**724227D**	**IWMI**	**No**	**-**	**+**	**+**	**+**	**-**
NATARAJAN	**66/M**	**711027D**	**ASMI**	**YES**	**STK**	**+**	**+**	**+**	**-**
KUPPAN	**52/M**	**712367D**	**IW+RV**	**YES**	**STK**	**+**	**+**	**+**	**-**
SUNDARAMMA	**72/M**	**726181D**	**IW+PW+RV**	**YES**	**STK**	**+**	**+**	**+**	**-**
TEEKARAM	**40/M**	**722623D**	**AWMI**	**YES**	**STK**	**-**	**+**	**-**	**+**
JAYAVELU	**63/M**	**939010C**	**AWMI**	**YES**	**TNK**	**-**	**-**	**+**	**-**
JULY 2010									
Nandasekar Reddy	**55/M**	**724342D**	**AWMI**	**Yes**	**STK**	**-**	**-**	**+**	**-**
Krappagan	**59/M**	**724316D**	**AWMI**	**Yes**	**STK**	**+**	**-**	**+**	**-**
Kulsar	**31/M**	**724366D**	**AWMI**	**Yes**	**STK**	**+**	**-**	**-**	**-**
Krishnamoorthy	**66/M**	**724387D**	**AWMI**	**Yes**	**TNK**	**-**	**-**	**+**	**+**
Govindasami	**61/M**	**724383D**	**IW+RV**	**Yes**	**STK**	**-**	**-**	**+**	**-**
Sundermmal	**58/M**	**724405D**	**IW+RV**	**Yes**	**TNK**	**-**	**-**	**-**	**+**
Venketesan	**70/M**	**728334D**	**AWMI**	**Yes**	**TNK**	**+**	**+-**	**-**	**+**
Ramathilagan	**85/M**	**724441D**	**IW+RV**	**Yes**	**STK**	**+**	**+**	**+**	**-**
Mani	**63/M**	**724442D**	**IW+RV**	**Yes**	**TNK**	**-**	**+**	**+**	**-**
Appudurai	**54/M**	**945904c**	**AWMI**	**Yes**	**STK**	**+**	**+**	**+**	**-**
Jayakumar	**50/M**	**730057d**	**AWMI**	**Yes**	**STK**	**+**	**+**	**+**	**+**
Ramamoorthy	**42/M**	**730078d**	**AWMI**	**Yes**	**STK**	**+**	**+**	**-**	**+**
Valliammal	**70/F**	**729989d**	**IW+RV**	**Yes**	**STK**	**-**	**+**	**-**	**-**
Shanthivel	**40/M**	**731143d**	**AWMI**	**Yes**	**STK**	**+**	**+**	**-**	**+**
Dhansekaran	**51/M**	**730251d**	**AWMI**	**Yes**	**TNK**	**+**	**-**	**+**	**+**
Manohar	**43/M**	**184524d**	**AWMI**	**Yes**	**STK**	**-**	**-**	**+**	**+**
Vendan	**44/M**	**730275d**	**AWMI**	**No**	**-**	**-**	**+**	**+**	**-**
Gunalan	**58/M**	**733964d**	**AWMI**	**No**	**-**	**-**	**+**	**-**	**+**
Arjunan	**62/M**	**730350d**	**IW+RV**	**Yes**	**STK**	**-**	**_**	**-**	**-**
Narayansami	**66/M**	**730348d**	**AWMI**	**No**	**-**	**-**	**+**	**-**	**-**
Pappuammal	**70/F**	**724540D**	**IW+RV**	**Yes**	**STK**	**-**	**-**	**-**	**-**
Bhaskaran	**52/M**	**724581D**	**IWMI**	**Yes**	**STK**	**+**	**+**	**+**	**-**
Munirathinam	**55/M**	**724580D**	**IW+RV**	**Yes**	**STK**	**+**	**+**	**+**	**-**
Subramani	**60/M**	**724585D**	**AWMI**	**Yes**	**STK**	**+**	**+**	**+**	**-**
Kumar	**49/M**	**724595D**	**AWMI**	**No**	**STK**	**+**	**+**	**+**	**-**
Yasodammal	**60/F**	**724565D**	**IW+RV**	**Yes**	**STK**	**-**	**+**	**-**	**-**
Sekar	**45/M**	**735027D**	**AWMI**	**Yes**	**STK**	**-**	**-**	**+**	**-**
Muniah	**54/M**	**735048D**	**IW+LW**	**Yes**	**TNK**	**-**	**-**	**+**	**-**
Manokaran	**46/M**	**625248D**	**AWMI**	**Yes**	**STK**	**+**	**-**	**+**	**-**
Thomas	**61/M**	**735088D**	**IW+RV**	**Yes**	**STK**	**+**	**-**	**-**	**-**
Kamaciammal	**55/F**	**737719D**	**AWMI**	**Yes**	**STK**	**-**	**-**	**+**	**-**
Abdul Mallick	**52/M**	**735267D**	**AWMI**	**Yes**	**STK**	**-**	**-**	**+**	**-**
Jagannathan	**60/M**	**739120D**	**AWMI**	**Yes**	**TNK**	**-**	**-**	**-**	**+**
Asmath Bee	**60/F**	**083816C**	**IW+RV**	**Yes**	**STK**	**+**	**+-**	**-**	**+**
Koteswari	**60/F**	**739117D**	**IW+RV**	**Yes**	**STK**	**+**	**+**	**+**	**-**
GANAPATHY	**77/M**	**303379B**	**IWMI**	**NO**		**-**	**+**	**+**	**-**
CHENGI CHINNA	**73/M**	**735048D**	**IW+LW**	**YES**	**TNK**	**+**	**+**	**+**	**-**
KEWLLACHAMMAL	**55/M**	**737719D**	**AWMI**	**YES**	**STK**	**+**	**+**	**+**	**+**
VARAMARY	**60/F**	**242883C**	**IWMI**	**NO**		**+**	**+**	**-**	**-**
VARAYAPPA	**74/M**	**739313D**	**IW+LW+PW**	**YES**	**TNK**	**-**	**+**	**-**	**-**
SONIPATH	**45/M**	**742350D**	**IW+LW+PW+RV**	**YES**	**STK**	**+**	**+**	**-**	**+**
MUNNAR	**56/M**	**902634C**	**AWMI**	**NO**	**-**	**+**	**-**	**+**	**+**
ANNAMALAI	**55/M**	**744160D**	**AWMI**	**NO**	**-**	**-**	**-**	**+**	**+**
NASUMA	**48/F**	**744397D**	**AWMI**	**YES**	**STK**	**-**	**+**	**+**	**-**
Murgesan	**4//M**	**739195D**	**AWMI**	**Yes**	**STK**	**-**	**+**	**-**	**+**
Radhakrishnan	**82/M**	**562735C**	**AWMI**	**No**	**-**	**-**	**_**	**-**	**-**
Devadoss	**44/M**	**739336D**	**AWMI**	**Yes**	**STK**	**-**	**+**	**-**	**-**
M.k Krishnan	**59/M**	**643752D**	**IWMI**	**Yes**	**STK**	**-**	**-**	**-**	**+**
Shaguntala	**50/F**	**492175D**	**AWMI**	**Yes**	**STK**	**+**	**+**	**+**	**-**
Raju	**70/M**	**750116D**	**IWMI**	**No**	**-**	**+**	**+**	**+**	**-**
Manuswami	**50/ M**	**750145d**	**AWMI**	**Yes**	**STK**	**+**	**+**	**+**	**-**
Sethuraja	**58/M**	**445029d**	**AWMI**	**Yes**	**STK**	**+**	**+**	**+**	**-**
Gopal	**50/M**	**750156d**	**AWMI**	**Yes**	**STK**	**-**	**+**	**-**	**+**
Amritha	**40/F**	**742404D**	**AWMI**	**Yes**	**STK**	**-**	**-**	**+**	**-**

Krishna	**72/M**	**742576D**	**IW+PW**	**Yes**	**STK**	**-**	**-**	**+**	**-**
Shanmugam	**62/M**	**739350D**	**IWMI**	**No**	**-**	**+**	**-**	**+**	**-**
Mohd Farooq	**55/M**	**742429D**	**AWMI**	**No**	**STK**	**+**	**-**	**-**	**-**
Krishnamoorthy	**55/M**	**742393D**	**AWMI**	**No**	**STK**	**-**	**-**	**+**	**+**
Ranganathan	**62/M**	**735349D**	**AWMI**	**Yes**	**STK**	**-**	**-**	**+**	**-**
Sikander	**59/M**	**634162D**	**AWMI**	**Yes**	**STK**	**-**	**-**	**-**	**+**
Satya	**52/M**	**737329D**	**AWMI**	**Yes**	**STK**	**+**	**+-**	**-**	**+**
Nagarithanam	**56/F**	**999377C**	**AWMI**	**Yes**	**STK**	**+**	**+**	**+**	**-**
Kadirvelu	**50/M**	**727580C**	**AWMI**	**No**	**-**	**-**	**+**	**+**	**-**
Ramamoorthy	**64/M**	**744315D**	**IW+RV**	**Yes**	**STK**	**+**	**+**	**+**	**-**
KatharBasha	**40/M**	**709984C**	**AWMI**	**Yes**	**STK**	**+**	**+**	**+**	**+**
Moorthy	**51/M**	**747846D**	**AWMI**	**Yes**	**STK**	**+**	**+**	**-**	**+**
Mani	**55/M**	**744156D**	**AWMI**	**Yes**	**STK**	**-**	**+**	**-**	**-**
Mohd Sarfaraz	**60/M**	**744349D**	**IW+RV**	**Yes**	**STK**	**+**	**+**	**-**	**+**
Elambaran	**35/M**	**744351D**	**AWMI**	**No**	**STK**	**+**	**-**	**+**	**+**
Srilatha	**44/F**	**744371D**	**AWMI**	**Yes**	**STK**	**-**	**-**	**+**	**-**
GANESH BABU	**47/M**	**609280D**	**IW+RV+PW**	**-**	**PTCA**	**-**	**+**	**+**	**-**
SWAMINATHAN	**76/M**	**613178D**	**AWMI**	**-**	**PTCA**	**-**	**+**	**-**	**+**
AMBARASAN	**64/M**	**613473D**	**AWMI**	**-**	**PTCA**	**-**	**_**	**-**	**-**
GOPAL	**67/M**	**613484D**	**AWMI**	**-**	**PTCA**	**-**	**+**	**-**	**-**
MANI	**67/M**	**616227D**	**AWMI**	**-**	**PTCA**	**-**	**-**	**-**	**+**
KUMAR	**48/M**	**616380D**	**IW+RV**	**-**	**PTCA**	**+**	**+**	**+**	**-**
MITTALAL JAIN	**58/M**	**616375D**	**AWMI**	**-**	**PTCA**	**+**	**+**	**+**	**-**
MADHIYAZHAGAN	**63/M**	**625580D**	**AWMI**	**-**	**PTCA**	**+**	**+**	**+**	**-**
JAGANNATHAN RAO	**52/M**	**634946D**	**AWMI**	**-**	**PTCA**	**+**	**+**	**+**	**-**
GOVINDASWAMY	**62/M**	**251169D**	**IWMI**	**-**	**PTCA**	**-**	**+**	**-**	**+**
SUNDARESAN	**54/M**	**638450D**	**AWMI**	**-**	**PTCA**	**-**	**-**	**+**	**-**
ABDUL MALLICK	**47/M**	**638499D**	**IW+RV**	**-**	**PTCA**	**-**	**-**	**+**	**-**
SHUK SALEEM	**40/M**	**648117D**	**AWMI**	**-**	**PTCA**	**+**	**-**	**+**	**-**
PRABHAKAR	**63/M**	**165122B**	**AWMI**	**-**	**PTCA**	**+**	**-**	**-**	**-**
KANDASWAMY	**81/M**	**648387D**	**AWMI**	**-**	**PTCA**	**-**	**-**	**+**	**+**
VINAYAGAM	**75/M**	**400268D**	**AWMI**	**-**	**PTCA**	**-**	**-**	**+**	**-**
MURALI	**46/M**	**648362D**	**AWMI**	**-**	**PTCA**	**-**	**-**	**-**	**+**
KIRUV BAKARAN	**54/M**	**932578A**	**IW+LW**	**-**	**PTCA**	**+**	**+-**	**-**	**+**
SUNDARJI	**56/M**	**658238D**	**IW+PW+RV**	**-**	**PTCA**	**+**	**+**	**+**	**-**
DHANAMAL SURANA	**60/M**	**426066C**	**AWMI**	**-**	**PTCA**	**-**	**+**	**+**	**-**
SIVARAJ	**51/M**	**658394D**	**AWMI**	**-**	**PTCA**	**+**	**+**	**+**	**-**